

From arc5 at ix.netcom.com Wed Feb 1 00:10:53 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Tue, 31 Jan 2012 23:10:53 -0600  
Subject: [BoatAnchors] National RX?  
Message-ID: <0EDBF481C0FD451489C1A6E55335F9AD@DaddyPC>

Can anyone identify this National?

<http://home.netcom.com/~arc5/nationalrx.jpg>

Thanks!

From smithab11 at comcast.net Wed Feb 1 11:15:03 2012  
From: smithab11 at comcast.net (B Smith)  
Date: Wed, 1 Feb 2012 11:15:03 -0500  
Subject: [BoatAnchors] crystals needed  
In-Reply-To: <01ea01cce064\$7be09910\$73a1cb30\$@com>  
References: <01ea01cce064\$7be09910\$73a1cb30\$@com>  
Message-ID: <1A8B7A96C96B4FA0865DB8D3692C12B0@De11560>

Bob I have a 6.0, 9001. (close enough) and some other that are within  
50 to 100 Kcs, you could at least  
check the converter out.  
Give me an address and I will put them in an envelope and send em to  
you.

73  
breck k4che

-----  
From: "Bob Kemp" <bkemp at bobkemp.com>  
Sent: Tuesday, January 31, 2012 5:05 PM  
To: "Boatanchors" <Boatanchors at theporch.com>  
Subject: [BoatAnchors] crystals needed

Need xtals for my Hallicrafters HA-10 converter: They are as follows.  
6.0,  
6.5, 7.0, 7.5, 8.0, 8.5 and 9.0 mhz. These are in the standard HC-6  
xtal  
holders (like Collins xtals).

Bob

Wa0vrc

THE GREATEST COMPLIMENT I CAN RECEIVE IS THE REFERRAL OF FRIENDS AND FAMILY

Bob Kemp  
Kemp Insurance  
Kemp Real Estate LLC  
108 E. Center St.  
Lake City, MN 55041  
phone: 651-345-5345  
FAX 651-345-2707  
email: <mailto:bkemp at bobkemp.com> bkemp at bobkemp.com

-----  
BoatAnchors mailing list  
BoatAnchors at theporch.com  
<https://minime.theporch.com/mailman/listinfo/boatanchors>

From ebjr37 at charter.net Wed Feb 1 12:10:24 2012  
From: ebjr37 at charter.net (Sandy)  
Date: Wed, 1 Feb 2012 11:10:24 -0600  
Subject: [BoatAnchors] [Boatanchors] National RX?  
In-Reply-To: <0EDBF481C0FD451489C1A6E55335F9AD@DaddyPC>  
References: <0EDBF481C0FD451489C1A6E55335F9AD@DaddyPC>  
Message-ID: <26F8A4A0211243FA962A0406E9F6A6E4@SandysLaptop>

Oviously, some "version" of the HR0? What frequency range does the coil set cover? It might be some special Aeronautical radio version?

73,

Sandy W5TVW

-----Original Message-----

From: David Stinson  
Sent: Tuesday, January 31, 2012 11:10 PM  
To: boatanchors at theporch.com ; boatanchors at mailman.qth.net  
Subject: [Boatanchors] National RX?

Can anyone identify this National?

<http://home.netcom.com/~arc5/nationalrx.jpg>

Thanks!

-----  
Boatanchors mailing list

Home: <http://mailman.qth.net/mailman/listinfo/boatanchors>

Help: <http://mailman.qth.net/mmfaq.htm>

Post: [mailto:Boatanchors at mailman.qth.net](mailto:Boatanchors@mailman.qth.net)

List Administrator: Duane Fischer, W8DBF

\*\* For Assistance: [dfischer at usol.com](mailto:dfischer@usol.com) \*\*

This list hosted by: <http://www.qsl.net>

Please help support this email list: <http://www.qsl.net/donate.html>

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No virus found in this message.

Checked by AVG - [www.avg.com](http://www.avg.com)

Version: 2012.0.1913 / Virus Database: 2109/4778 - Release Date: 01/31/12

From arc5 at ix.netcom.com Wed Feb 1 13:17:50 2012

From: arc5 at ix.netcom.com (David Stinson)

Date: Wed, 1 Feb 2012 12:17:50 -0600

Subject: [BoatAnchors] [Boatanchors] National RX?

In-Reply-To: <26F8A4A0211243FA962A0406E9F6A6E4@SandysLaptop>

References: <0EDBF481C0FD451489C1A6E55335F9AD@DaddyPC>

<26F8A4A0211243FA962A0406E9F6A6E4@SandysLaptop>

Message-ID: <72D9EFD4CAE141368CD2DE0D7A033617@DaddyPC>

I haven't recieved it yet, but it includes the rack,

speaker, power supply/coil box with the coils.

Here are more photos. A good friend snagged it

for me from an estate for an excellent low price.

It might be a "mix-n-match," but I'm still excited ;-).

It's so clean it might even work.

I never worked on an HRO before.

Gonna be fun.

73 Dave S.

----- Original Message -----

From: "Sandy" <ebjr37 at charter.net>

To: "David Stinson" <arc5 at ix.netcom.com>; <boatanchors at theporch.com>;  
<boatanchors at mailman.qth.net>

Sent: Wednesday, February 01, 2012 11:10 AM

Subject: Re: [Boatanchors] National RX?

> Obviously, some "version" of the HRO? What frequency range does the  
> coil set cover? It might be some special Aeronautical radio  
> version?

>

> 73,

>

> Sandy W5TVW

>

> -----Original Message-----

> From: David Stinson

> Sent: Tuesday, January 31, 2012 11:10 PM

> To: boatanchors at theporch.com ; boatanchors at mailman.qth.net

> Subject: [Boatanchors] National RX?

>

> Can anyone identify this National?

>

> <http://home.netcom.com/~arc5/nationalrx.jpg>

>

> Thanks!

>

> -----  
> Boatanchors mailing list

> Home: <http://mailman.qth.net/mailman/listinfo/boatanchors>

> Help: <http://mailman.qth.net/mmfaq.htm>

> Post: <mailto:Boatanchors at mailman.qth.net>

>

> List Administrator: Duane Fischer, W8DBF

> \*\* For Assistance: [dfischer at usol.com](mailto:dfischer at usol.com) \*\*

>

>

> This list hosted by: <http://www.qsl.net>

> Please help support this email list: <http://www.qsl.net/donate.html>

>

>

> -----

> No virus found in this message.

> Checked by AVG - [www.avg.com](http://www.avg.com)

> Version: 2012.0.1913 / Virus Database: 2109/4778 - Release Date:

> 01/31/12

From W0E0M at aol.com Wed Feb 1 13:25:45 2012  
From: W0E0M at aol.com (W0E0M at aol.com)  
Date: Wed, 1 Feb 2012 13:25:45 -0500 (EST)  
Subject: [BoatAnchors] national SW-5 RX  
Message-ID: <4e0bc.6c479f.3c5adda8@aol.com>

i recently acquired one of these in good cond., no extra coils, tho, but it has been repainted grey. Tried to strip the grey paint, but it all comes off.

Any chance someone has a good cabinet? otherwise may have to paint over. Is the correct color available?

Will

From arc5 at ix.netcom.com Wed Feb 1 14:29:52 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Wed, 1 Feb 2012 13:29:52 -0600  
Subject: [BoatAnchors] [Boatanchors] National RX?  
In-Reply-To: <CABBDE74E10A4C7C8BBB447ABDC40C3F@VALUED20606295>  
References:  
<0EDBF481C0FD451489C1A6E55335F9AD@DaddyPC><26F8A4A0211243FA962A0406E9F6A6E4@Sandys Laptop>  
<72D9EFD4CAE141368CD2DE0D7A033617@DaddyPC>  
<CABBDE74E10A4C7C8BBB447ABDC40C3F@VALUED20606295>  
Message-ID: <9764D36225094A1FAA783089011E09FC@DaddyPC>

Sorry I forgot to link the photos:

<http://home.netcom.com/~arc5/HR0/>

From bob at nofrowns.net Wed Feb 1 13:29:16 2012  
From: bob at nofrowns.net (Bob Jackson)  
Date: Wed, 1 Feb 2012 12:29:16 -0600  
Subject: [BoatAnchors] HQ-110C For Sale  
Message-ID: <B54254BDE74F4B4AAF1B932FE1575217@c1408123a>

HQ-110 with clock. Clock extension to set hands is missing. Ham bands only (no WARC of course). In good operating condx. Electrolytics have been replaced. Alignment is good but not "perfect". Cosmetics are at least VG - SMALL paint loss on top of cabinet. Includes a partial set of replacement tubes. No docs but they're on the 'Net. Pics available. \$100 plus \$35 to CONUS. Reply direct.

Thanks and 73,

Bob AG5X

From arc5 at ix.netcom.com Fri Feb 3 09:40:46 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Fri, 3 Feb 2012 08:40:46 -0600  
Subject: [BoatAnchors] OK All You "Artistic" Types...  
Message-ID: <3862707281894001B0317A04B7FDC524@DaddyPC>

I know there's got to be someone on our lists  
that knows about this:  
Mike Hanz (without who's generous advice and assistance  
I wouldn't get 5 steps along in most of these projects)  
and I are working on reviving an AN/ARC-2 for the  
upcoming hamfest displays. I'm "touching-up" paint dings  
and am having trouble with my brushes shedding bristles  
into the new finish.  
I learned not to go with cheap chinese brushes long ago,  
but these, from an actual "art store," were \*supposed\*  
to be better than that. I used them when new-  
about a year ago- and they were fine, but now...  
Well.... they ain't. The whole bunch of them has started  
shedding bristles. I guess the "hairs" got brittle.  
Does cleaning "good" brushes with mineral spirits  
make the bristles fall out?

Can you "artsee" folks recommend a brand of touch-up  
brush that will actually hold up without shedding bristles?  
I can't buy \$20-each brushes, but I'd spend 5 or 10  
if I had to ;-).

TNX ES 73 DE Dave AB5S

From gumbear at pacbell.net Fri Feb 3 12:58:56 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Fri, 3 Feb 2012 09:58:56 -0800  
Subject: [BoatAnchors] OK All You "Artistic" Types...  
References: <3862707281894001B0317A04B7FDC524@DaddyPC>  
Message-ID: <001b01cce29d\$864b0cb0\$5e9d480c@KB6NAX>

> ...Can you "artsee" folks recommend a brand of touch-up  
brush that will actually hold up without shedding bristles?

Hold on a second, David, let me put down my tea cup and dust the crumbs off  
of my work bench ;-)

There's two kinds of paint brush bristles you'll find in artsee-craftee  
stores, natural bistle from animals and synthetic bristles from Mother

Chemicals. Both types of bristles work well with oil based paints. Natural bristles don't work so well with water based paints. Your problem seems to be the deterioration of the glue that binds the bristles together inside the metal crimp that holds the bristles to the brush handle. A good approach to solving the problem is not to look for hideously expensive brushes but to get by with inexpensive brushes and throw them away when they start to fall apart.

Welcome, David, you are now a member of the artsee-craftee boatanchors community.

Arden Allen  
KB6NAX

From knjhanlon at msn.com Fri Feb 3 16:42:37 2012  
From: knjhanlon at msn.com (JAMES HANLON)  
Date: Fri, 3 Feb 2012 14:42:37 -0700  
Subject: [BoatAnchors] HRO  
Message-ID: <SNT106-W10EBDD3AD922C1989C822CA0710@phx.gbl>

Dave,

Congratulations on the HRO - it looks like a nice one from the pictures. The one picture of the receiver in the car seat shows the front of the coil drawer, and the good news is that there is a Bandspread chart on the right hand side. That means it has ham-band bandspread as well as the general coverage range. You will appreciate that. It looks a lot like the "D" coil which covers 1.7 to 4 Mc on the general coverage range and 3.5 to 4 Mc on the bandspread range.

I have a fair amount of HRO experience. I have an HRO (Senior), SN L-175, an HRO-5TA1, my original receiver from 1950, an HRO-50T, and an HRO-50R1. So if you need any help, for example a copy of the manual for the original HRO or some coaching on alignment, keep me in mind.

73,

Jim Hanlon, W8KGI

From kd5byb at kd5byb.net Sat Feb 4 18:52:58 2012  
From: kd5byb at kd5byb.net (Ben Hall)  
Date: Sat, 04 Feb 2012 17:52:58 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
Message-ID: <4F2DC4DA.1020104@kd5byb.net>

Good evening all,

Boatanchor content up-front: I'm in the process of building a power supply to power several boatanchor radios that don't have internal AC mains supplies.

Since this is going to be a multi-purpose unit, I'd sure like to have some control over the output voltage. Some sort of simple regulator would be nice.

The other night, my mind wandered as I was trying to go to sleep and I remembered the zener diode / NPN pass transistor regulator.

At low voltages, the problem with them, in my opinion, is that they don't offer very tight regulation. However, in a B+ HV power supply, I don't need tight regulation. Just some regulation.

Behind me is a bread-boarded 100VDC design, based on a BUL216 (800V) transistor, a 100V zener, and some other components to draw zener current and put about 45mA of load on it for test purposes. It's run about 20 minutes at 150VDC input, the transistor (isolated and heat-sunk!) is barely warm, and the output is a solid 99 VDC.

When I reduce draw to 20mA, the output voltage pretty much stays the same. So it seems like the circuit works. At least at those two load points and DC input voltage. ;)

Now for the question - I know it's somewhat heresy, but has anyone used a similar setup in a BA application for any length of time? Any issues with reliability?

The key for me is that the design is simple - if its going to be unreliable and need a crow-bar protector, that starts to kill the simplicity...

thanks much,  
ben

From gumbear at pacbell.net Sun Feb 5 00:21:34 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Sat, 4 Feb 2012 21:21:34 -0800  
Subject: [BoatAnchors] Power Supply Regulators...  
References: <4F2DC4DA.1020104@kd5byb.net>  
Message-ID: <001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>

Ben, don't oversimplify the requirements for such a power supply if you want it to be "reliable." You need a either a crowbar or interrupter that tracks the selected output voltage. A fault that excessively overvoltages a BA



could multiply the amount of repair work you have to do. You also need a current limiter that keeps surge current limited to a value that won't invoke second breakdown in your pass transistor when switching on a BA. I suggest you study the application notes for employing a uA723 (LM723, etc.) in a high voltage regulator circuit. Better to blow up a few parts in a breadboard learning how to make a reliable power supply than rush to build a nicely packaged time bomb.

Arden

> ....Now for the question - I know it's somewhat heresy, but has anyone used a similar setup in a BA application for any length of time? Any issues with reliability? .....

> .....The key for me is that the design is simple - if its going to be unreliable and need a crow-bar protector, that starts to kill the simplicity...

From navy.radio at gmail.com Sun Feb 5 09:00:25 2012

From: navy.radio at gmail.com (Nick England)

Date: Sun, 5 Feb 2012 09:00:25 -0500

Subject: [BoatAnchors] Richmond VA FrostFest report

Message-ID: <CAB55hNd06xN9JPnEy\_E\_Xzg0H+6WGm36CkUkoNuBd0sb4Uivig@mail.gmail.com>

Well, more photos more than a report -

<http://www.virhistory.com/ham/rich-12.htm>

Saw lots of boatanchor pals there and I thought a pretty good selection of BA's. No military other than a couple of R-390A's. Fair amount of homebrew gear (tuners, amps) and parts. Pretty good attendance - this location draws the DC area crowd as well as NC.

cheers,

Nick K4NYW

[www.navy-radio.com](http://www.navy-radio.com)

From provero at ct.metrocast.net Sun Feb 5 10:34:38 2012

From: provero at ct.metrocast.net (P.J. Rovero)

Date: Sun, 5 Feb 2012 10:34:38 -0500

Subject: [BoatAnchors] Richmond VA FrostFest report

Message-ID: <62628.1328456078@ct.metrocast.net>

On Sun 02/05/12 09:00 , Nick England <navy.radio at gmail.com> wrote:

> No military other than a couple of R-390A's.

The SP-600 is close..... a couple of other unusual items here, like the Drake RR-1 marine receiver (I once had an RR-2 marine reserve receiver...)

We have months to go before any decent events up here in New England... :-)

P.J. "Josh" Rovero                      Ham Radio: KK1D  
Web:        <http://sites.google.com/site/roveroresearch/>

From gumbear at pacbell.net   Sun Feb  5 13:50:21 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Sun, 5 Feb 2012 10:50:21 -0800  
Subject: [BoatAnchors] Power Supply Regulators...  
References: <c2b3.676e2e3a.3c601067@cs.com>  
Message-ID: <002201cce437\$071f0770\$869d480c@KB6NAX>

That same zener but of one of less watts dissipation spec can easily fire an SCR which will hard clamp the power supply and blow the fuse in an instant. Much better way to go.

Current limit is easily accomplished by addition of another transistor and sense resistor that starves the base drive of the pass transistor when the current limit transistor is made to conduct by the voltage drop across the sense resistor when the current limit point is reached.

Arden

> The simplest solution to both over voltage output and over current shut down requires two components. The first is a zener diode with a voltage rating maybe 10 or more volts higher than the desired output voltage. The second is a fuse (quick acting, not slow blow). The additional requirements are that the zener must be capable of safely blowing the fuse with no additional output load on the supply. And the fuse must be rated greater than the HV.

.....

From kd5byb at kd5byb.net Mon Feb 6 20:04:33 2012  
From: kd5byb at kd5byb.net (Ben Hall)  
Date: Mon, 06 Feb 2012 19:04:33 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
References: <4F2DC4DA.1020104@kd5byb.net>  
<001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
Message-ID: <4F3078A1.6080100@kd5byb.net>

Good evening Arden and all,

Thanks much for taking a look at and providing comments on my power supply idea. I really appreciate the feedback and ended up starting with a clean piece of paper.

And I mean a clean piece of paper! Over the weekend I built up two little breadboards - one with a bridge rectifier setup, the other with a full-wave rectifier setup.

Using the choke and transformer I intend to use, I did actual measurements under load of the possible variations. The shack was filled with the smell over power resistors getting way too hot as I pressed into service what I had... ;)

The results were very interesting as while I had known generally what the various configurations would do, I didn't know the extent.

Example - we know that choke-input should have better regulation, but I had NO IDEA how "better" the regulation was. Now I do.

Another lesson was about critical inductance. In one trial the load on my choke-input filter was too low and the voltage shot up to darn near 1kV until I switched it off. Thankfully, I'd designed the little boards with 2kV in mind so nothing blew up. ;)

This has really changed my strategy. Originally, I was all set for a full-wave cap-input followed by a standard series-regulator.

I'm now seriously considering a shunt-regulator setup, with the shunt providing the critical load on the choke-input filter. Or maybe I should say I'm seriously considering it until I change my mind? ;)

Anyways, I'm learning a lot and having a blast.

thanks much and 73,

ben, kd5byb

On 2/4/2012 11:21 PM, Arden Allen wrote:

> Ben, don't oversimplify the requirements for such a power supply if you want  
> it to be "reliable." You need either a crowbar or interrupter that tracks  
> the selected output voltage. A fault that excessively overvoltages a BA  
> could multiply the amount of repair work you have to do. You also need a  
> current limiter that keeps surge current limited to a value that won't  
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> in a high voltage regulator circuit. Better to blow up a few parts in a  
> breadboard learning how to make a reliable power supply than rush to build a  
> nicely packaged time bomb.

From anchor at ec.rr.com Mon Feb 6 20:23:22 2012

From: anchor at ec.rr.com (Al Parker)

Date: Mon, 06 Feb 2012 20:23:22 -0500

Subject: [BoatAnchors] Power Supply Regulators...

In-Reply-To: <4F3078A1.6080100@kd5byb.net>

References: <4F2DC4DA.1020104@kd5byb.net> <001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>

Message-ID: <4F307D0A.9040602@ec.rr.com>

Way to go, Ben,

That's the best way to learn.

73,

Al, W8UT

[www.boatanchors.org](http://www.boatanchors.org)

[www.hammarlund.info](http://www.hammarlund.info)

"There is nothing -- absolutely nothing -- half so much  
worth doing as simply messing about in boats"

Ratty, to Mole

On 2/6/2012 8:04 PM, Ben Hall wrote:

> Good evening Arden and all,

>

> Thanks much for taking a look at and providing comments on my power  
> supply idea. I really appreciate the feedback and ended up starting with  
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>

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> little breadboards - one with a bridge rectifier setup, the other with a  
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> with the smell over power resistors getting way too hot as I pressed  
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> 1kV until I switched it off. Thankfully, I'd designed the little boards  
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>  
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>> Ben, don't oversimplify the requirements for such a power supply if  
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>> the selected output voltage. A fault that excessively overvoltages a BA  
>> could multiply the amount of repair work you have to do. You also need a  
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>  
> -----  
> BoatAnchors mailing list  
> BoatAnchors at theporch.com  
> <https://minime.theporch.com/mailman/listinfo/boatanchors>  
>

From broehrig at aurora.edu Mon Feb 6 20:24:51 2012  
From: broehrig at aurora.edu (Robert Roehrig (K9EUI))  
Date: Mon, 6 Feb 2012 19:24:51 -0600 (CST)  
Subject: [BoatAnchors] coils for RU-16  
In-Reply-To: <304141431.674830.1328577883939.JavaMail.root@mars.aurora.edu>  
Message-ID: <897423102.674832.1328577891594.JavaMail.root@mars.aurora.edu>

Looking for coil sets for a RU-16 receiver.

--  
K9EUI  
Bob Roehrig ITS  
630-844-4898

From gumbear at pacbell.net Tue Feb 7 08:29:59 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Tue, 7 Feb 2012 05:29:59 -0800  
Subject: [BoatAnchors] Power Supply Regulators...  
References: <4F2DC4DA.1020104@kd5byb.net>  
<001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>  
Message-ID: <000201cce5ce\$354ffd00\$b79d480c@KB6NAX>

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> ....I'm now seriously considering a shunt-regulator setup, with the shunt providing the critical load on the choke-input filter. Or maybe I should say I'm seriously considering it until I change my mind? ;)

Your circuit may be at or near resonance at twice line frequency.

Experiment with capacitor values and add a bleeder resistor for min load operation.

I recommend you don't try a shunt regulator, it wastes more power and is harder to optimise for a wide range of loads.

From jmccarty at alcatel-lucent.com Tue Feb 7 16:00:30 2012  
From: jmccarty at alcatel-lucent.com (John McCarty)  
Date: Tue, 07 Feb 2012 15:00:30 -0600  
Subject: [BoatAnchors] R25 1st IF needed  
Message-ID: <4F3190EE.4030805@alcatel-lucent.com>

Hello groups

A friend of mine picked up a fairly nice R-25 ARC-5 receiver but it was missing the first IF transformer (705kHz). Does anyone have an extra? I would assume that the first IF from a 46104 would work as well.

tnx + 73

John n9hrt

From arc5 at ix.netcom.com Tue Feb 7 20:49:07 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Tue, 7 Feb 2012 19:49:07 -0600  
Subject: [BoatAnchors] Pi- Matching Network: When?  
Message-ID: <DD0CD39D27BA43F2A29547FF4BBF40BD@DaddyPC>

Anyone have any idea when the Pi output matching network appeared?

From w7qho at aol.com Tue Feb 7 23:01:02 2012  
From: w7qho at aol.com (mac)  
Date: Tue, 7 Feb 2012 20:01:02 -0800  
Subject: [BoatAnchors] [Milsurplus] Pi- Matching Network: When?  
In-Reply-To: <DD0CD39D27BA43F2A29547FF4BBF40BD@DaddyPC>  
References: <DD0CD39D27BA43F2A29547FF4BBF40BD@DaddyPC>  
Message-ID: <4F4E9005-96C5-4012-A1F6-9DCE95F5EAE0@aol.com>

I find it in my 1935 Radio (magazine) Handbook described as the "Collins PI Network." Not used quite like commonly seen today,

though. Appears as an antenna matching circuit fed off a variable tap on a conventional PA tank coil.

Dennis D. W7QH0  
Glendale, CA

On Feb 7, 2012, at 5:49 PM, David Stinson wrote:

> Anyone have any idea when the Pi output matching  
> network appeared?  
> -----  
> Milsurplus mailing list  
> Home: <http://mailman.qth.net/mailman/listinfo/milsurplus>  
> Help: <http://mailman.qth.net/mmfaq.htm>  
> Post: [mailto:Milsurplus at mailman.qth.net](mailto:Milsurplus@mailman.qth.net)  
>  
> This list hosted by: <http://www.qsl.net>  
> Please help support this email list: <http://www.qsl.net/donate.html>

From k4pf at juno.com Wed Feb 8 02:03:42 2012  
From: k4pf at juno.com (k4pf at juno.com)  
Date: Wed, 8 Feb 2012 07:03:42 GMT  
Subject: [BoatAnchors] Pi- Matching Network: When?  
Message-ID: <20120208.020342.26934.0@webmail06.vgs.unttd.com>

> "David Stinson" <arc5 at ix.netcom.com> wrote  
Anyone have any idea when the Pi output matching  
network appeared?

Hi,

The "Simplified pi network solutions" article in Nov 1953 CQ  
referenced an article in Apr 1944 "Electronics"  
called "Pi Networks as Coupled Tank Circuits"  
by Schottland.

73,  
Ed Knobloch

From franklin6209 at att.net Wed Feb 8 17:50:31 2012  
From: franklin6209 at att.net (Gary Franklin)



Date: Wed, 08 Feb 2012 17:50:31 -0500  
Subject: [BoatAnchors] Elmac Power Supply  
Message-ID: <4F32FC37.7060007@att.net>

I need a power supply for my Elmac PMR-8. Does anyone have one to sell?  
If not does anyone have schematics and a parts list for one I could home brew?

Thanks  
Gary K8BKB

From arc5 at ix.netcom.com Thu Feb 9 10:49:18 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Thu, 9 Feb 2012 09:49:18 -0600  
Subject: [BoatAnchors] Pi- Matching Network: When?  
In-Reply-To: <4F33DF50.6040604@aafradio.org>  
References: <DD0CD39D27BA43F2A29547FF4BBF40BD@DaddyPC>  
<4F4E9005-96C5-4012-A1F6-9DCE95F5EAE0@aol.com>  
<4F33DF50.6040604@aafradio.org>  
Message-ID: <BE9A192BA300459D859096240DABC5D9@DaddyPC>

Thanks to everyone for the help on this.  
Looks like the answer is 1931 or earlier.  
Reason I ask-  
One of my projects is a transmitter  
to match with a 1936 receiver.  
I'd prefer a shunt-feed Pi-net vs. a link coupler,  
but only if it's temporally correct.

73 Dave AB5S

From mike\_25-z at aafradio.org Thu Feb 9 10:15:36 2012  
From: mike\_25-z at aafradio.org (aafradio)  
Date: Thu, 09 Feb 2012 10:15:36 -0500  
Subject: [BoatAnchors] [Milsurplus] Pi- Matching Network: When?  
In-Reply-To: <4F33DF50.6040604@aafradio.org>  
References: <4F33DF50.6040604@aafradio.org>  
Message-ID: <4F33E318.1020202@aafradio.org>

On Feb 7, 2012, at 5:49 PM, David Stinson wrote:  
>> Anyone have any idea when the Pi output matching  
>> network appeared?

Looks like May 1931, Dave. A quick google search brought out this  
article on the Windom antenna by John Nagle in the May 1978 issue of Ham

Radio Magazine:

"William L. Everitt, as faculty advisor to the students who worked on the antenna, contributed much to its development. Everitt began his amateur career in 1914 as 2ABI; in 1921 he became 8CRI. When he decided to go into communications professionally, he dropped amateur radio because he did not want to have the same vocation and avocation. Everitt was later to become a prominent author and educator. He retired as Dean of Engineering at the University of Illinois and went on to become Dean Emeritus at that university.

Unfortunately, Dr. Everitt has been ill-treated by the amateur community. His work on the off-center-fed antenna is largely unknown and certainly unrecognized.

Unhappily, the same thing happened to him a second time. \*Everitt was the first to describe the use of a pi network as a coupling device.\* He published this work in the Proceedings of the IRE in 1931 (12) and in Communications; (13) the pi network is also described in his book, Communication Engineering. (14)

Arthur Collins, W9CXX, of Cedar Rapids, Iowa, recognized the advantages of the pi network to couple the output stage of a transmitter to a transmission line, and used it in his transmitters. This application played an important part in establishing the reputation that Collins equipment will load up to "anything." Collins described the pi network to the amateur community in a QST article (15) and in a similar article in Radio, (16) and the network became known by old-timers as the "Collins Coupler" instead of, perhaps, the "Everitt Easy Loader."

#### References:

12. W. L. Everitt, "Output Networks for Radio-Frequency Power Amplifiers," Proceedings of the IRE, May, 1931, page 725.
13. W. L. Everitt, "Coupling Networks," Communications, September, 1938
14. W. L. Everitt, Communication Engineering, McGraw-Hill, New York, 1937, page 263
15. A. A. Collins, W9CXX, "A Universal Antenna Coupling System for Modern Transmitters," OST, February, 1934, page 15
16. A. A. Collins, W9CXX, "The Answers to the Flood of Inquiries Regarding the Collins Antenna System," Radio, March, 1934, page 5

John J. Nagle, K4KJ (SK)  
Herndon, Virginia  
May 1978 in Ham Radio Magazine

So now you know...

73,

Mike KC4TOS

From bob at nofrowns.net Thu Feb 9 15:48:22 2012  
From: bob at nofrowns.net (Bob Jackson)  
Date: Thu, 9 Feb 2012 14:48:22 -0600  
Subject: [BoatAnchors] ID a strange tube  
Message-ID: <33A7B0381D7A4B3DBB82D255C2E28936@c1408123a>

GE/RCA tube marked JRC-927. Very small, flat-top round envelope; only 3 pins. Any clues?

Tnx,

Bob AG5X

From spr at earthlink.net Thu Feb 9 18:58:38 2012  
From: spr at earthlink.net (spr at earthlink.net)  
Date: Thu, 9 Feb 2012 15:58:38 -0800 (GMT-08:00)  
Subject: [BoatAnchors] ID a strange tube  
Message-ID: <3866547.1328831918803.JavaMail.root@mswamui-swiss.atl.sa.earthlink.net>

As I recall, a 927 is a photocell, side-looking.

/scott

-----Original Message-----

>From: Bob Jackson <bob at nofrowns.net>  
>Sent: Feb 9, 2012 12:48 PM  
>To: "porch.boat" <boatanchors at theporch.com>, "qth.boat" <boatanchors at mailman.qth.net>, "puck.boat" <boatanchors at puck.nether.net>  
>Subject: [BoatAnchors] ID a strange tube  
>  
>GE/RCA tube marked JRC-927. Very small, flat-top round envelope; only 3 pins. Any clues?  
>  
>Tnx,  
>  
>Bob AG5X  
>  
>-----  
>BoatAnchors mailing list  
>BoatAnchors at theporch.com  
><https://minime.theporch.com/mailman/listinfo/boatanchors>

From ae4r at cox.net Sat Feb 11 01:51:16 2012  
From: ae4r at cox.net (Mike Steussy)  
Date: Sat, 11 Feb 2012 01:51:16 -0500  
Subject: [BoatAnchors] [Milsurplus] Pi- Matching Network: When?  
Message-ID: <4F360FE4.1020104@cox.net>

Ahoy! BZ & thanks to Mike KC4TOS! Great info.

Interestingly, 20 years after Art Collins' 1934 QST article, all the homebrew transmitters featured in the 1954 ARRL Handbook are link coupled except two pi-networks, one in a single 6AG7 oscillator for beginners, and the other in a 4-250A linear amplifier. In the Output Coupling Systems theory section, pi-section output tank gets two very short paragraphs and one diagram, almost an afterthought.

It seems like the ARRL could have been more energetic in promoting use of pi-net outputs for reasons of (1) safety, (2) easier construction and (3) TVI suppression. This was before my time, though. Does anyone have views on this?

73, Mike AE4R

From brianclarke01 at optusnet.com.au Sat Feb 11 06:47:38 2012  
From: brianclarke01 at optusnet.com.au (Brian Clarke)  
Date: Sat, 11 Feb 2012 22:47:38 +1100  
Subject: [BoatAnchors] Power Supply Regulators...  
References: <4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>  
Message-ID: <FEE1B23414AA4245B84281BC88FCA384@WORKSHOP>

Hello Ben,

Both shunt and series regulators are analog devices, and so neither is very efficient. But they are both very quiet RF-wise.

Think about possible failure modes and their effects:

- a.. When the series regulator fails open circuit, no damage is done downstream.
- b.. When the shunt regulator fails open circuit, your downstream load is subject to the full might of the unregulated supply.
- c.. When the series regulator fails short circuit within, usually a fuse will clear and all will go to sleep nicely.
- d.. When a series regulator fails short circuit supply to load, your downstream load is subject to the full might of the unregulated supply.
- e.. When a shunt regulator fails short circuit within, usually a fuse will clear and all will go to sleep nicely, just like its series cousin.

Off load, series regulators consume very little power, while shunt regulators consume all your power. What is your intended duty cycle?

Another form of regulator uses switching principles; it can be much more efficient - but it usually makes much more RF noise. And it is quite difficult for newcomers to design and construct for high Voltages.

You need to decide what you want your power supply to do, not only when it is working properly, but also when it fails. Even when it is working properly, does it do things, say, to your power bill, that make your hobby rather expensive - to you or your loved ones; or does it do damage to your neighbours? And when it fails, can you afford the cost of the repairs either to the supply or to the downstream load?

In general, shunt regulators are used for low Voltage, low power applications. The only application I can think of where real power is thrown away in shunt regulators is in the regenerative braking systems on electric trains, where MegaWatts of power may be dissipated. But can you afford the power bill of a mass transit company?

C-input and L-input filters have their pluses and minuses, too. Whichever you choose, the overall power delivered ( $E \times I$ ) from the filter will be much the same. The C-input filter will give a higher output Voltage and lower current than the L-input filter. However, the C-input filter will require capacitors able to handle higher Voltages than an L-input filter. In the L-input filter, the diodes chosen can have a lower VRRM than for the C-input filter; also, the commutation noise from the diodes will be much less = lower RF noise to manage. If a diode fails with the C-input filter, the output power falls and the noise rises because the rectifier has become half-wave. If a diode fails with an L-input filter, the inductor will get extremely upset by producing massive Voltage spikes as it tries to maintain 'constant current' when its input shuts off.

Whichever way you choose, if you value your load, put in some protection. Arden is correct.

73 de Brian, VK2GCE.

From navy.radio at gmail.com Sat Feb 11 07:53:08 2012

From: navy.radio at gmail.com (Nick England)

Date: Sat, 11 Feb 2012 07:53:08 -0500

Subject: [BoatAnchors] [Milsurplus] Pi- Matching Network: When?

In-Reply-To: <4F360FE4.1020104@cox.net>

References: <4F360FE4.1020104@cox.net>

Message-ID: <CAB55hNfihF0hSQfa+N7W+TdqsVaBGn0A8ms6xHEYHAIbrj2QQw@mail.gmail.com>

Hiya Mike - Yep, I recall going through the 1950s ARRL handbooks and seeing Boom! - in just about one year all the link coupled push-pull designs went away and were replaced by single-ended pi-net designs .

So cheap and ubiquitous 6146's and co-ax became the standard for many shacks, replacing p-p 304TH's and open line. Which was chicken and which was egg?

cheers,  
Nick K4NYW

On Sat, Feb 11, 2012 at 1:51 AM, Mike Steussy <ae4r at cox.net> wrote:

> Ahoy! BZ & thanks to Mike KC4TOS! ?Great info.

>

> Interestingly, 20 years after Art Collins' 1934 QST article, all the  
> homebrew transmitters featured in the 1954 ARRL Handbook are link coupled  
> except two pi-networks, one in a single 6AG7 oscillator for beginners, and  
> the other in a 4-250A linear amplifier. ?In the Output Coupling Systems  
> theory section, pi-section output tank gets two very short paragraphs and  
> one diagram, almost an afterthought.

>

...

> 73, Mike AE4R

From gumbear at pacbell.net Sat Feb 11 08:12:35 2012

From: gumbear at pacbell.net (Arden Allen)

Date: Sat, 11 Feb 2012 05:12:35 -0800

Subject: [BoatAnchors] Power Supply Regulators...

References: <4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>

<FEE1B23414AA4245B84281BC88FCA384@WORKSHOP>

Message-ID: <001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX>

Hi Brian,

You said,

"Off load, series regulators consume very little power, while shunt regulators consume all your power. ...."

This is the determinative argument to use a series pass regulator and why nearly all regulators are of this type. The most likely cause of power supply failure is overload. A series regulator goes up in smoke with overload, a shunt regulator takes it easy while the overload goes up in smoke. But, ...a series regulator protection starves the overload to keep itself within dissipation limits which also decreases power delivered to the overload. A shunt regulator gives up regulating while the overload continues using excessive power, therefore a shunt regulator requires a more sophisticated means of protecting both itself and the load.

Life gets more complicated when the power supply needs to provide low output voltage, both types of regulators dissipate as much or more power than the load. That calls for "preregulation," most easily accomplished manually with a variac for a useful but simple regulated power supply. A little fancier a gadget would be the common shafting of the variac and the regulator output voltage setting potentiometer.

Arden Allen  
KB6NAX

Adopt a shelter dog,  
save an innocent life,  
and make a friend forever =:-)

From gumbear at pacbell.net Sat Feb 11 08:18:00 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Sat, 11 Feb 2012 05:18:00 -0800  
Subject: [BoatAnchors] [Milsurplus] Pi- Matching Network: When?  
References: <4F360FE4.1020104@cox.net>  
<CAB55hNfihF0hSQfa+N7W+TdqsVaBGn0A8ms6xHEYHAIbrj2QQw@mail.gmail.com>  
Message-ID: <001e01cce8bf\$97d7c680\$d39e480c@KB6NAX>

> ....Which was chicken and which was egg? ...

Or more appropriately, which was fried chicken and which was boiled egg?  
Coax was (is) much safer and easier to route about one's residence.

Arden Allen  
KB6NAX

Properly trained a man can be  
dog's best friend. -Corey Ford

From spr at earthlink.net Sat Feb 11 12:09:30 2012  
From: spr at earthlink.net (Scott Robinson)  
Date: Sat, 11 Feb 2012 09:09:30 -0800  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX>  
References: <4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>  
<FEE1B23414AA4245B84281BC88FCA384@WORKSHOP>  
<001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX>  
Message-ID: <4F36A0CA.3050403@earthlink.net>

Folks,

I don't think anyone heard Brian's original intent for this regulator. Hew was thinking about using a shunt regulator in place of a bleeder resistor to maintain the minimum current for a choke input filter to work properly. If you set the shunt regulator a bit higher than the expected under-load output voltage, the HV would still be about right while the tubes were warming up rather than 1.5 times higher. As the tubes warmed up and became the load, reducing the voltage a bit below the regulator's set point, the shunt regulator would shut off, consuming no power.

This is kinda like having a loss-free bleeder resistor.

Regards,

Scott

On 2/11/12 5:12 AM, Arden Allen wrote:

> Hi Brian,  
>  
> You said,  
>  
> "Off load, series regulators consume very little power, while shunt  
> regulators consume all your power. ...."  
>  
> This is the determinative argument to use a series pass regulator and why  
> nearly all regulators are of this type. The most likely cause of power  
> supply failure is overload. A series regulator goes up in smoke with  
> overload, a shunt regulator takes it easy while the overload goes up in  
> smoke. But, ...a series regulator protection starves the overload to keep  
> itself within dissipation limits which also decreases power delivered to the  
> overload. A shunt regulator gives up regulating while the overload  
> continues using excessive power, therefore a shunt regulator requires a more  
> sophisticated means of protecting both itself and the load.  
>  
> Life gets more complicated when the power supply needs to provide low output  
> voltage, both types of regulators dissipate as much or more power than the  
> load. That calls for "preregulation," most easily accomplished manually  
> with a variac for a useful but simple regulated power supply. A little  
> fancier a gadget would be the common shafting of the variac and the  
> regulator output voltage setting potentiometer.  
>  
> Arden Allen  
> KB6NAX  
>  
> Adopt a shelter dog,  
> save an innocent life,



> and make a friend forever =:-)  
>  
> -----  
> BoatAnchors mailing list  
> BoatAnchors at theporch.com  
> <https://minime.theporch.com/mailman/listinfo/boatanchors>  
>

From n5cm at rtconline.com Sat Feb 11 11:31:21 2012  
From: n5cm at rtconline.com (Ken)  
Date: Sat, 11 Feb 2012 10:31:21 -0600  
Subject: [BoatAnchors] Hammeter.  
Message-ID: <000801cce8da\$97394850\$6401a8c0@yourb27fb1c401>

Folks,

I need the address of the person or company that can repair the Simpson Model 240 please. It was called the:

"Hammeter" I think. Thanks,

Ken N5CM

=====

Email scanned by PC Tools - No viruses or spyware found.  
(Email Guard: 7.0.0.18, Virus/Spyware Database: 6.19230)  
<http://www.pctools.com/>

=====

From brianclarke01 at optusnet.com.au Sat Feb 11 19:10:47 2012  
From: brianclarke01 at optusnet.com.au (Brian Clarke)  
Date: Sun, 12 Feb 2012 11:10:47 +1100  
Subject: [BoatAnchors] Power Supply Regulators...  
References: <4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>  
<FEE1B23414AA4245B84281BC88FCA384@WORKSHOP>  
<001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX>  
Message-ID: <584D2FD14F2D40A79AE7D568118A2995@WORKSHOP>

Hello Arden,

Aha, pre-regulators! I first met them when doing studies for my masters degree way back in the late 1960s. I'm not sure I like the idea of manual intervention - too easy to miss a slow or even a fast rise or a gradual

brown-out - and motorising Variacs seems a bit like overkill for this particular application. When I worked in power distribution, oil-submerged, motor-driven auto-transformers were all the go for household mains Voltage regulation. Boy, you should have heard the lovely noise as fellas arrived home and their wives turned on their cookers to provide their evening meals (this is not a sexist comment - that's how things were back then), and then a bit later when the TV adverts came on, as people got up to boil water for their tea or coffee.

What I did in one power supply - 13V5 @ 100 A - was to use a Sola-type self-regulating, centre-tapped-secondary transformer to drive a full-wave rectifier - not bridge - to provide only just enough headroom to feed a series of ex-IBM power supply germanium pass transistors. Still powers all my 12 V radio shack gear very efficiently for a series-pass design. Other hams, when viewing demonstrations of this power supply, jokingly ask whether I can use it for arc-welding.

Good to chat with you again. Still got that bottle of rye for my next visit state-side?

73 de Brian, VK2GCE.

On Sunday, February 12, 2012 12:12 AM, Arden said:

> Hi Brian,  
>  
> You said,  
>  
> "Off load, series regulators consume very little power, while shunt  
> regulators consume all your power. ...."  
>  
> This is the determinative argument to use a series pass regulator and why  
> nearly all regulators are of this type. The most likely cause of power  
> supply failure is overload. A series regulator goes up in smoke with  
> overload, a shunt regulator takes it easy while the overload goes up in  
> smoke. But, ...a series regulator protection starves the overload to keep  
> itself within dissipation limits which also decreases power delivered to  
> the  
> overload. A shunt regulator gives up regulating while the overload  
> continues using excessive power, therefore a shunt regulator requires a  
> more  
> sophisticated means of protecting both itself and the load.  
>  
> Life gets more complicated when the power supply needs to provide low  
> output  
> voltage, both types of regulators dissipate as much or more power than the  
> load. That calls for "preregulation," most easily accomplished manually

> with a variac for a useful but simple regulated power supply. A little  
> fancier a gadget would be the common shafting of the variac and the  
> regulator output voltage setting potentiometer.  
>  
> Arden Allen  
> KB6NAX

From brianclarke01 at optusnet.com.au Sat Feb 11 19:21:16 2012  
From: brianclarke01 at optusnet.com.au (Brian Clarke)  
Date: Sun, 12 Feb 2012 11:21:16 +1100  
Subject: [BoatAnchors] Power Supply Regulators...  
References: <4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>  
<FEE1B23414AA4245B84281BC88FCA384@WORKSHOP>  
<001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX>  
<4F36A0CA.3050403@earthlink.net>  
Message-ID: <D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP>

Not so, Scott,

The originator of this thread was Ben, who wanted a simple, reliable regulator for powering a boatanchor. As people got onto the thread, Ben shifted to becoming enamoured of shunt regulation. Then, older and wiser heads started advising him to be very careful of shunt regulators for powering irreplaceable gear.

Nonetheless, you make a valid point about using starved shunt regulation.

73 de Brian, VK2GCE.

On Sunday, February 12, 2012 4:09 AM, Scott chipped in with:

> Folks,  
>  
> I don't think anyone heard Brian's original intent for this regulator. Hew  
> was thinking about using a shunt regulator in place of a bleeder resistor  
> to maintain the minimum current for a choke input filter to work properly.  
> If you set the shunt regulator a bit higher than the expected under-load  
> output voltage, the HV would still be about right while the tubes were  
> warming up rather than 1.5 times higher. As the tubes warmed up and became  
> the load, reducing the voltage a bit below the regulator's set point, the  
> shunt regulator would shut off, consuming no power.  
>  
> This is kinda like having a loss-free bleeder resistor.

>  
> Regards,  
>  
> Scott

From kd5byb at kd5byb.net Sun Feb 12 13:23:08 2012  
From: kd5byb at kd5byb.net (Ben Hall)  
Date: Sun, 12 Feb 2012 12:23:08 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP>  
References: <4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX>  
<4F3078A1.6080100@kd5byb.net>  
<FEE1B23414AA4245B84281BC88FCA384@WORKSHOP>  
<001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX>  
<4F36A0CA.3050403@earthlink.net>  
<D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP>  
Message-ID: <4F38038C.6000809@kd5byb.net>

Hi Brian and all,

First of all, thanks much for the great replies on the subject.

So, I figured I'd share a status of where I am and what I'm thinking now.

I've decided that the supply must have current-limiting and over-voltage protection. It will be used as an experimental supply and for powering gear that is not easy to replace. So, I'd rather burn up the supply than the gear attached to it.

I had thought about choke-input supply with a shunt regulator providing a minimum draw instead of bleeder. But like others noted, the downside here is that even when the load is drawing no power, that shunt has to be drawing power and is producing heat.

Another reason I went away from shunts is that it isn't any less simple than a series regulator once I add over-current protection. Or, better said, one benefit of a series-regulated supply is that you already have a good portion of the circuitry needed for the current-limiter.

In looking around the internet, I came across the following, which is a pretty good read in my opinion. Yes, it is written by a tube-audio guy, but he seems to be an exception from the nuttiness in the tube-audio world:

<<http://www.next-tube.com/articles/hvs/hvrEn.pdf>>

It is a series-regulated, current-limited supply which will meet my needs with some tweaks:

- 1) I'm looking for more output power than 280V at 0.100 mA. One use for this power supply will be for a Chinese 102E transmitter that is looking for 450V to 500V at 145mA.
- 2) The IRF744 MOSFET is 450V rated unit, so it will need to be replaced with something better. Ideally, in the 1kV range.
- 3) I will have to rework some of the resistor values, but the author very nicely has a section on changing the output voltage and current. (another reason why I liked this article)
- 4) It does NOT have over-voltage protection. I will have to add that feature. In my travels I've found both zener/SCR type crowbars and ones that use a dedicated over-voltage protection IC to trigger an SCR.

This is perhaps my next area of investigation - I'm planning to build some low-voltage versions of both and see how they operate.

Then I'll build a test-version of the above regulator and take it for a spin to see how it does. Eventually I'll layout a PCB for it, but that's a bit down the road...

thanks much and 73,  
ben, kd5byb

On 2/11/2012 6:21 PM, Brian Clarke wrote:

> Not so, Scott,  
>  
> The originator of this thread was Ben, who wanted a simple, reliable  
> regulator for powering a boatanchor. As people got onto the thread, Ben  
> shifted to becoming enamoured of shunt regulation. Then, older and wiser  
> heads started advising him to be very careful of shunt regulators for  
> powering irreplaceable gear.  
>  
> Nonetheless, you make a valid point about using starved shunt regulation.  
>  
> 73 de Brian, VK2GCE.  
>  
> On Sunday, February 12, 2012 4:09 AM, Scott chipped in with:  
>  
>  
>> Folks,  
>>

>> I don't think anyone heard Brian's original intent for this regulator.  
>> Hew was thinking about using a shunt regulator in place of a bleeder  
>> resistor to maintain the minimum current for a choke input filter to  
>> work properly. If you set the shunt regulator a bit higher than the  
>> expected under-load output voltage, the HV would still be about right  
>> while the tubes were warming up rather than 1.5 times higher. As the  
>> tubes warmed up and became the load, reducing the voltage a bit below  
>> the regulator's set point, the shunt regulator would shut off,  
>> consuming no power.

>>

>> This is kinda like having a loss-free bleeder resistor.

>>

>> Regards,

>>

>> Scott

>

>

>

> -----

> BoatAnchors mailing list

> BoatAnchors at theporch.com

> <https://minime.theporch.com/mailman/listinfo/boatanchors>

>

>

From gumbear at pacbell.net Sun Feb 12 20:56:04 2012

From: gumbear at pacbell.net (Arden Allen)

Date: Sun, 12 Feb 2012 17:56:04 -0800

Subject: [BoatAnchors] Power Supply Regulators...

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP>

<4F38038C.6000809@kd5byb.net>

Message-ID: <000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX>

Ben,

The only thing that catches my eye is the zener diode current limiter. I would add the standard BJT current limiter where the current limit threshold is determined by base-emitter forward voltage and the voltage gain will take up the slop in the MOSFET's gate voltage uncertainty. Or else tweak R8 for the particular MOSFET(s) you have chosen. You will still need zener VD1 to protect the MOSFET gate from excessive gate-source voltage.

For your 500 volt supply you may need VT1 to be higher in collector-emitter sustaining voltage. You can probably find a MJE13003 that will easily

sustain 500 volts collector-emitter with the base open.

The body diode of the MOSFET will protect it during shut-down.

With a higher drain-source voltage drop you may need to increase the dissipation reserve by parallelling devices to keep things within their safe operationg areas (SOA).

Keep in mind a crowbar is for protecting the load, not the power supply. If invoked you'll need to replace a few parts. Fuse the unregulated voltage into the pass transistor.

Just some things to kick around.

Arden

> ...Hi Brian and all,

First of all, thanks much for the great replies on the subject.

So, I figured I'd share a status of where I am and what I'm thinking now.

I've decided that the supply must have current-limiting and over-voltage protection. It will be used as an experimental supply and for powering gear that is not easy to replace. So, I'd rather burn up the supply than the gear attached to it.

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thanks much and 73,  
ben, kd5byb

.....

From arc5 at ix.netcom.com Sun Feb 12 22:39:41 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Sun, 12 Feb 2012 21:39:41 -0600  
Subject: [BoatAnchors] A 1936 HRO Means a Weekend Project  
Message-ID: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>

Well my HRO Sr arrived. Clean as a pin and very pretty.  
It's serial number L114, which means it was built in early 1936.  
<http://home.netcom.com/~arc5/HRO/hro1.jpg>

Doesn't have a tube one in it, LOL.  
Guess the estate folks thought those old tubes would buy them a retirement; good luck with that ;-).  
That's OK because I've got most of them  
and I'll get to plugging them in shortly.

It came mounted in a floor rack with lots of room.  
Well.... there's nothing for it but to build a  
little mid-1930s CW rig to go in the rack with it.



So since the AN/ARC-2 is presently on hold,  
I started digging-through my collection of  
1920s and 1930s parts.

I settled on a simple 1935 single-tube pentode crystal oscillator.  
I wanted it to \*look\* like a mid-1930s "home brew" rig-  
wooden baseboard with ground-busses  
screwed to it and the whole "scrounged out of the junk yard"  
effect. I had just the tube, too- A Raytheon RK20 pentode.  
It's tall and bright and all-around awesome-looking.  
Trouble is... I can't find the darned thing!  
So for now, I decided to go with a late-30s (1937)  
GE version of the same tube- save a different fil voltage-  
the 814. It looks a lot like the RK20 and  
will be easy to swap-out when I find the Raytheon.

While the grid and screen circuits remained the same,  
I built three different versions of the plate circuit:  
Series feed-link out, shunt feed-link out  
and a Pi-network. The link outputs worked fine.  
I'm still de-bugging the Pi network.  
Here are diagrams of the two successful configurations:

<http://home.netcom.com/~arc5/HR0/1935tx.jpg>  
<http://home.netcom.com/~arc5/HR0/1935tx2.jpg>

I forgot to include the world's gawkie-est  
parasitic plate choke in the diagrams,  
but you'll see the awkward thing in the photos.  
I probably should put one in the screen lead,  
but haven't so far.  
Also- I had to couple "C-Special" a little closer  
than the description might indicate, due to  
my early Bliley crystal having activity issues.  
I had to take it apart and clean the nearly  
inch-across blank to get it to work at all,  
but seems OK now.

I "fudged" on the tank coil and used ARC-5  
transmitter parts. I'll wind a "real" 1930s tank  
later, after I've worked all the other bugs out.  
Also need to replace that disk-ceramic plate  
blocking cap, which is like bringing a Formula One  
to an Egyptian chariot race.

For the successful link-coupled tanks, I used the  
PA coil from a 2.1-3.0 MC transmitter. Did this  
because its link has more turns than the one

for 3-4 MC. I removed the powdered-iron core and shorted three turns at the top. Using a 400 pFd cap, this allows me to resonate the tank on both 80 and 160 meters and the extra link turns mean I can actually feed a 50-ohm load.

I'm going to mount meters on another panel that will go across the top but leave the middle open so I can see the tube. Here's some views. I left the "loading" cap mounted as I'm not giving-up on Pi-output just yet.

<http://home.netcom.com/~arc5/HR0/814rig4.jpg>  
<http://home.netcom.com/~arc5/HR0/814rig3.jpg>  
<http://home.netcom.com/~arc5/HR0/814rig2.jpg>  
<http://home.netcom.com/~arc5/HR0/814rig1.jpg>

You'll notice an insulation-coated wire coming from a white stand-off and sort-of "twirling" around the plate lead. This is "C-Special." Plate-Grid isolation is so "good" in these old tubes (in the 814, the plate/grid interelectrode capacitance is like 1/4th of a picoFarad!), you have to provide external feedback to get it to oscillate. Adjustment is a little tricky- High-activity crystals don't need much, low-activity crystals need a lot.

For God's sweet sake, remember there's B++ on that plate lead!

To tune up, you hook the rig to a dummy load, uncouple the loop and slowly turn the tank cap until the tube oscillates. Peak the output then- and this is important- tune the cap for slightly less capacitance- 5-10% from peak output is usually about right. This is required to get the feedback phase correct and give a clean note. Tuned to peak output or on the higher-C side will cause chirp and/or failure to reliably oscillate. The 400 pFd tuning cap makes this a little "touchy;" 150 or 200 pFd would have been better if I were just going to stay on 80 meters and 150 is about as big as you can use if you build this rig for 40. On the lower-C side of the peak you can get a nice, clean note if your crystal is active and

you have enough coupling in "C-Special."  
Now start tightening the link coupling and  
re-tweaking. If you're using a 50-ohm load  
and the rig stops oscillating, you need to tighten  
"C-Special." Reactive antenna loads can cause  
the rig to stop oscillating even if C-Special is "right."

With 650 volts on the plate and 250 on the screen,  
the rig will output 15-20 watts. I'll be going  
to a kiloVolt once I'm happy with all the "tweaks."  
That should get it up to 40+ watts.  
I may decide to just keep it at 20 watts,  
since I'm making contacts without trouble.  
My first contact on the rig was a station in North Carolina,  
which isn't bad. If you hear me on 3522 some evening,  
give me a call.

Oh yes one neat thing: My first 814, for no reason I know,  
developed an open filament. I have another 814 but  
it's a little "gassy;" the getter is just about all used-up.  
After letting the tube sit and draw about 25 mils at 250 volts  
for a few hours, the "gas" seemed to go away and it works fine.  
I got to looking at the really nice, full getter on my now dead-fil  
814 laying in the bottom of the trash can  
and decided I had nothing to lose, so hooked 12 volts to the  
filament pins and started banging on the tube. Lady Luck smiled,  
because after about the 8th try, the fil ends touched  
and welded back together.  
I left it lit for a few hours and the weld seems to have "taken."  
A few off-n-on cycles and the fil is still lighting and the tube is  
working normally. I'll see in the morning if it survived the night.  
It will get gentle handling for sure.

73 DE Dave AB5S

Ronnie: Can you post this over to Glowbugs? Thanks.

From arc5 at ix.netcom.com Sun Feb 12 22:44:56 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Sun, 12 Feb 2012 21:44:56 -0600  
Subject: [BoatAnchors] [Boatanchors] A 1936 HRO Means a Weekend Project  
In-Reply-To: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>  
References: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>  
Message-ID: <5D3A58FFC2E44116A513D49CAE6BF189@DaddyPC>

Correction:

I've got R1 marked incorrectly in both the diagrams.  
The values that seemed to work best were 7-15 kOhms.  
Spec sheet calls for 7K, but that's with like 1200 volts  
on the plate. I settled for 10K and it seems to work well.

From arc5 at ix.netcom.com Sun Feb 12 22:52:44 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Sun, 12 Feb 2012 21:52:44 -0600  
Subject: [BoatAnchors] [Boatanchors] A 1936 HR0 Means a Weekend Project  
In-Reply-To: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>  
References: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>  
Message-ID: <795FCB6CEAA44D209E4412C299578874@DaddyPC>

P.P.S.

You can get about 20% more power out if you eliminate R2,  
but this rig tends to spend some time not oscillating, and  
the tube will draw high current. R2 limits that.  
It may not care at 500 V B++ but your tube might  
pop a sweat if you're running a lot more.

From brianclarke01 at optusnet.com.au Mon Feb 13 03:33:02 2012  
From: brianclarke01 at optusnet.com.au (Brian Clarke)  
Date: Mon, 13 Feb 2012 19:33:02 +1100  
Subject: [BoatAnchors] Power Supply Regulators...  
References:  
<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net>  
<000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX>  
Message-ID: <53859FAAF578476AB07E6C883A13AE05@WORKSHOP>

Hello Arden,

I see your advice about fusing before the pass transistor. Why?

73 de Brian, VK2GCE.

On Monday, February 13, 2012 12:56 PM, Arden said:

> Ben,  
>  
> <snip>>  
> Keep in mind a crowbar is for protecting the load, not the power supply.  
> If  
> invoked you'll need to replace a few parts. Fuse the unregulated voltage  
> into the pass transistor.  
>  
> Just some things to kick around.  
>  
> Arden

From arc5 at ix.netcom.com Mon Feb 13 06:38:16 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Mon, 13 Feb 2012 05:38:16 -0600  
Subject: [BoatAnchors] 1935 Transmitter Antique Crystal  
Message-ID: <E2AD983542BB4EE39A49E49EACC7011C@DaddyPC>

Question was asked about that big antique  
crystal in the rig. This letter copied to the  
list for general information.

-----

The big Blaley xtal wouldn't oscillate at first, either.  
I think the bakelite outgasses over the years  
and there was also a small amount of dust  
in the holder. I put a lint-free cloth on my bench  
and took it apart. Using a good, fine brush, I  
brushed out the holder and plates and gently  
brushed-off the blank, touching just the edges.  
As I'm sure you know, it's very fragile.  
Then I used mineral spirits to clean the  
plates and the blank. Put all the parts on  
the cloth and covered them with a tissue for  
several hours to dry. Gave everything a final  
brushing and "blow," then put it all back together.  
It fired right up, but still is not as active as some  
of my other xtals. Works OK with extra feedback.  
Actually, I've tried FT-243 and HC-6 with this  
rig at up to 600 volts on the plate. That's good  
for about 15 watts out, which is plenty if you have  
a good antenna. They seem to hold-up,  
but I haven't done an actual QSO with one.  
I'll give a couple a long test and let you know.  
73 Dave AB5S

From arc5 at ix.netcom.com Mon Feb 13 09:39:29 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Mon, 13 Feb 2012 08:39:29 -0600  
Subject: [BoatAnchors] [Boatanchors] A 1936 HRO Means a Weekend Project  
In-Reply-To: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>  
References: <7D386D6BA02048CB87BD923BD1631219@DaddyPC>  
Message-ID: <C6FD8E830A5F4376AD4313D31DBB1727@DaddyPC>

P.P.P.P.P.S.:

If you want to shorten your plate lead, the 814  
works fine on its side as long as you keep pins  
2 and 4 vertical. I like it vertical;  
looks more "hillbilly." :-)

From gumbear at pacbell.net Mon Feb 13 12:49:10 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Mon, 13 Feb 2012 09:49:10 -0800  
Subject: [BoatAnchors] Power Supply Regulators...  
References:  
<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080  
100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d  
39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@W  
ORKSHOP><4F38038C.6000809@kd5byb.net>  
<000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX>  
<53859FAAF578476AB07E6C883A13AE05@WORKSHOP>  
Message-ID: <000701cccea77\$d07ecb00\$d69d480c@KB6NAX>

Hi Brian,

That's to limit the damage to the regulator circuit board. A fast acting  
fuse will open before the line fuse, which is usually a slow blower. Less  
chance for open traces and scorched circui board.

Arden

> I see your advice about fusing before the pass transistor. Why?

73 de Brian, VK2GCE.

On Monday, February 13, 2012 12:56 PM, Arden said:

> Ben,  
>  
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> into the pass transistor.  
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>  
> Arden

From w7qho at aol.com Mon Feb 13 15:03:26 2012  
From: w7qho at aol.com (mac)  
Date: Mon, 13 Feb 2012 12:03:26 -0800  
Subject: [BoatAnchors] [Boatanchors] 1935 Transmitter Antique Crystal  
In-Reply-To: <2CB050751B1C40078A93BC51DED4327C@VALUED20606295>  
References: <E2AD983542BB4EE39A49E49EACC7011C@DaddyPC>  
<2CB050751B1C40078A93BC51DED4327C@VALUED20606295>  
Message-ID: <C9CA97D2-37E9-4E79-8432-EB850CB25E25@aol.com>

For more than you ever wanted to know about crystals, related history,  
production, WW2 problems, etc., etc., see:  
<<http://www.ieee-uffc.org/main/history.asp?file=bottom>>

Dennis D. W7QH0  
Glendale, CA

\*\*\*\*\*

From pekelney at rspeng.com Mon Feb 13 15:39:39 2012  
From: pekelney at rspeng.com (richard pekelney)  
Date: Mon, 13 Feb 2012 12:39:39 -0800  
Subject: [BoatAnchors] 120VDC->28VDC Motor Generator Set  
In-Reply-To: <mailman.1.1329156000.12409.boatanchors@theporch.com>  
References: <mailman.1.1329156000.12409.boatanchors@theporch.com>  
Message-ID: <7E904B97-693E-401D-8D9D-0C29410451BF@rspeng.com>

Does anyone have an idea where we might find a WW II, USN style, 120 VDC to 28 VDC, approx. 130 watts motor generator set? For example a CCL-211014. We have been looking for a long time as part of the restoration of USS Pampanito (<http://maritime.org/sub>). Anyone curious about the project can take a look at the rough status notes we just put on our web site now that we are mounting equipment

(photos are at the end):  
<http://maritime.org/pres/iff/>

A list of what we need to finish the project is at:  
<http://maritime.org/wish/iff.htm>

Thank you,

rich

From knjhanlon at msn.com Mon Feb 13 17:41:08 2012  
From: knjhanlon at msn.com (JAMES HANLON)  
Date: Mon, 13 Feb 2012 15:41:08 -0700  
Subject: [BoatAnchors] 1936 HRO  
Message-ID: <SNT106-W39FC4BF784ED2068AA5747A07F0@phx.gbl>

Dave,

Since your HRO came without tubes, you will probably find that it would benefit from a complete alignment once you get a new set of tubes installed. The tube-to-tube differences in capacitance, especially in the higher frequency circuits, will throw things off a bit.

I have Serial Number L-175, from the same construction lot as yours. It's a great receiver. Did you get the manual with your set? If not I could scan in my original manual.

73,

Jim, W8KGI

From johnmb at nc.rr.com Mon Feb 13 17:48:08 2012  
From: johnmb at nc.rr.com (john)  
Date: Mon, 13 Feb 2012 17:48:08 -0500  
Subject: [BoatAnchors] [Boatanchors] 1935 Transmitter Antique Crystal  
In-Reply-To: <C9CA97D2-37E9-4E79-8432-EB850CB25E25@aol.com>  
References: <E2AD983542BB4EE39A49E49EACC7011C@DaddyPC>  
<2CB050751B1C40078A93BC51DED4327C@VALUED20606295>  
<C9CA97D2-37E9-4E79-8432-EB850CB25E25@aol.com>  
Message-ID: <6.2.1.2.2.20120213174630.029de470@pop-server.nc.rr.com>

I have one of Dr Bottoms (!) self published books on quartz crystal technology...Good stuff and a fascinating technology. I got it 30 years ago ... and it was hard to find then....



John K5M0

At 03:03 PM 2/13/2012, you wrote:

>For more than you ever wanted to know about crystals, related history,  
>production, WW2 problems, etc., etc., see:

><<http://www.ieee-uffc.org/main/history.asp?file=bottom>>

>

>

>Dennis D. W7QHO

>Glendale, CA

>

>\*\*\*\*\*

>

>-----  
>BoatAnchors mailing list

>BoatAnchors at theporch.com

><https://minime.theporch.com/mailman/listinfo/boatanchors>

From arc5 at ix.netcom.com Mon Feb 13 20:52:23 2012

From: arc5 at ix.netcom.com (David Stinson)

Date: Mon, 13 Feb 2012 19:52:23 -0600

Subject: [BoatAnchors] 1935 Transmitter: Pi Output

Message-ID: <FF1BB7E5AFAE45F0AFCF47440A8BAFBA@DaddyPC>

I go the Pi-output to work.

Diagram at:

<http://home.netcom.com/~arc5/HR0/1935txPi.jpg>

Interesting: The tap on the tank coil is critical.

Both power out and keying are affected by moving  
the tank tap even a turn or two.

The ratio between the plate tuning cap and  
the tank coil value has to be juuuust so.

"Tweaking" this output is more difficult than  
using the link coupling, but I get more power  
out and I can band-switch easily.

Crystal activity is also critical for best power out  
and for clean keying. Getting 25 watts out on  
40 meters and about 20 watts on 80 meters.

Haven't fiddled 160 yet, though I know it will go.

\*Real\* FT-243 crystals seem to work fine  
if they have good activity. HC-6 crystals  
overheat and drift all over,

but I haven't cracked one yet.  
The little HC-25s usually stuffed into  
FT-243 holders these days will die instantly.  
Those work fine with more modern oscillators  
running milliwatts out,  
but not in this gorilla mongo-oscillator.  
I understand a pilot lamp in series with the crystal  
can work as a current limiter,  
but haven't tried it yet.

73 Dave AB5S

From brian at flex-tel.com.au Wed Feb 15 18:53:20 2012  
From: brian at flex-tel.com.au (Brian Goldsmith)  
Date: Thu, 16 Feb 2012 10:53:20 +1100  
Subject: [BoatAnchors] Fluke 896A.  
Message-ID: <017B7A232226374A9B375FE1A866FE4D4150D4@flextel.flex-tel.com.au>

Greetings to all.  
I am looking for a downloadable .pdf copy of a Fluke 896A  
operators/service manual.  
Can anyone help?  
Thanks for the read,  
Brian g.

From charlesmorris800 at centurytel.net Thu Feb 16 14:21:54 2012  
From: charlesmorris800 at centurytel.net (Charles)  
Date: Thu, 16 Feb 2012 13:21:54 -0600  
Subject: [BoatAnchors] I-152 indicator schematic?  
Message-ID: <4DF94EC2-35D1-4859-8EBB-5842F6D8C0A5@centurytel.net>

Does anyone have the schematic for an I-152D indicator ("J scope"),  
part of the BC-788/SCR-718 radar altimeter?  
thanks  
Charles

From JJan-3 at cox.net Thu Feb 16 16:30:04 2012  
From: JJan-3 at cox.net (Jim Hill)  
Date: Thu, 16 Feb 2012 13:30:04 -0800  
Subject: [BoatAnchors] SCARS Auction  
Message-ID: <20120216213310.BTH04155.fed1rmfepo102.cox.net@fed1rmimpo306.cox.net>

I posted the following on the Glowbugs reflector, but there may be

some Boatanchor members who are interested:

Those who live in the Los Angeles-Orange county area of southern California might be interested in the annual SCARS (Southern California Antique Radio Society) auction this coming Saturday, February 18 in the city of Orange. Details can be found at <http://www.antiqueradios.org/calendar.html>. Anyone can come, but only members can buy and sell. Memberships are \$20, and you can join at the event. Buying and selling costs \$5.00, but the fee includes a nice lunch. It's a good club, which has a number of meets and publishes a periodic bulletin, but most interest is in BCB receivers.

There will be 50-100+ radios (I guess) plus magazines and other documents available. It's all radio-oriented, none of the other stuff typically seen at swap meets. Most are BCB receivers from the 20's to .... but there will be some boatanchor radios there, too. I'll guarantee at least four, as I'm taking a NC-2-40D, two SX-28's, and a S-20R, plus a Hallicrafters speaker. Condition of these items is fair to ok. It's a good place to sell your boatanchors that are hard to pack for shipping, much better than the TRW Swap Meet. Test equipment and VHF equipment doesn't sell very well. If you have a battery radio and need some 01A's, it is an excellent place to check. If you plan on selling, it's best to download the forms (used by the auctioneer to identify the radios) and fill them out before coming. If you participate, plan on being there most of the day. Money transfers usually occur late in the late afternoon.

From arc5 at ix.netcom.com Thu Feb 16 21:03:10 2012

From: arc5 at ix.netcom.com (David Stinson)

Date: Thu, 16 Feb 2012 20:03:10 -0600

Subject: [BoatAnchors] New MF Amateur Band Approved at WRC - 472 to 479kHz

In-Reply-To: <01d501cccd00\$c3be3ff0\$cda2f604@mainframe>

References:

<564079E63A6D4516840762150622FC88@milesdesk><71EA67C1FE194A3D863E42E027B7D43B@DaddyPC>

<01d501cccd00\$c3be3ff0\$cda2f604@mainframe>

Message-ID: <7BFC974999EF425EB8D671215891B68B@DaddyPC>

----- Original Message -----

From: "KD7JYK DM09" <kd7jyk at earthlink.net>

> I'm wondering if anyone will actually use the band or if it will  
> just fill

> up with a bunch of QRSS beacons...

Well, that's up to us ;-).

I remember when a lot of people switched over to QRSS on 160-190 KC... what a drag. I could hear normal-speed CW and have QSOs with stations all over the west while the QRSS guys were sending a "dit." That's "communication?"

Once it's been established - and it certainly has- that you can copy a flea-fart across the galaxy if your baud rate is slow enough and you integrate long enough, I don't personally see the point in "proving" it another 500 times. Believe me- if you have a reasonably RF-quiet location (or good noise nulling), an effective antenna (which doesn't have to be gigantic) and, most important: accurate frequency calibration on both ends, you can QSO with normal CW and certainly with the digital modes across the continent and across The Pond. If someone wants to spend their time "re-inventing the (QRSS) wheel" for the 500th time, God bless them and good luck. Sounds like a stone-cold bore to me: been done a zillion times. I'm going to be calling "CQ" at 20 WPM and having a ball.

YMMV ES 73 DE Dave AB5S

From arc5 at ix.netcom.com Thu Feb 16 21:16:29 2012

From: arc5 at ix.netcom.com (David Stinson)

Date: Thu, 16 Feb 2012 20:16:29 -0600

Subject: [BoatAnchors] New MF Amateur Band Approved at WRC - 472 to 479kHz

In-Reply-To: <7BFC974999EF425EB8D671215891B68B@DaddyPC>

References:

<564079E63A6D4516840762150622FC88@milesdesk><71EA67C1FE194A3D863E42E027B7D43B@DaddyPC><01d501cccd00\$c3be3ff0\$cda2f604@mainframe>

<7BFC974999EF425EB8D671215891B68B@DaddyPC>

Message-ID: <4976CC51755B4EBAAB7DEFFE20020666@DaddyPC>

Oh forgot to mention- Back in, I think it was 87 or 88, once our Longwave group discovered we really could hear these Part 15 "1 watt and 50-foot antenna" signals on 180 KC for great distances, Mike Mideke in the mountains of central California and Sheldon (Remington? Can't remember Sheldon's last name... Steve McGrevey will know) were able to record Mike's scrupulously-legal, conservative antenna "Z2" normal-speed CW signal in Hawaii.

Those were some exciting times on Longwave.

My point is this: Electrically-short antennas on 180-190 KC were effective for communications and physically similar antennas, because they are being used on much higher frequencies, will be even more effective on our new band.

I know it's a year off, but I'm breaking out my Longwave tuning units and cleaning them up. I want a head start ;-).

73 Dave S.

From arc5 at ix.netcom.com Fri Feb 17 07:48:44 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Fri, 17 Feb 2012 06:48:44 -0600  
Subject: [BoatAnchors] WTD: Bliley CNM-2 Crystal Holder  
Message-ID: <80E79DDF4E8A4849B79B8A78DE7AA578@DaddyPC>

Bliley made a neat, conical, brown bakelite with red top cover crystal holder called the "CM-2."

<http://home.netcom.com/~arc5/HRO/CM2a.jpg>

I'm hoping to find a couple more of them. Will talk trade or green.

Thanks!  
Dave S.

From arc5 at ix.netcom.com Fri Feb 17 12:24:05 2012  
From: arc5 at ix.netcom.com (David Stinson)  
Date: Fri, 17 Feb 2012 11:24:05 -0600  
Subject: [BoatAnchors] Plexiglass and the 1935 Station Project.  
Message-ID: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>

First- let me thank everyone for the great suggestions on working Plexiglass or Lexan. These lists are the best!

Several have asked me for more details on this, and why the Plexiglass.

I'm building a 1935-era station and want it to represent what a young, new ham would actually have used to make his first QSOs. The old magazines and boatanchor sites are full of big, multi-transformer, multi-chassis, then-state-of-the-art transmitters. Well, in 1935, only guys who were rich could build such a transmitter. Average young boys who were in love with the magic of radio had no access to big money. If they were going to have a transmitter at all, they'd have to build it from scavenged parts and pieces given them by older hams. They'd have one transmitting tube if they were lucky; they usually had to make-do with receiver tubes. They'd build it on a wooden board, not an expensive metal box. And lots of youngsters worked the world with those simple transmitters.

There are lots of those "rich man" transmitters still around and they're beautiful machines, but I wanted to build a typical "po-boy" rig to go with my new HRO and see how it would do. While I've got it on the air now and have worked several states, I've still got lots of "finishing" work to do. I want to use Plexiglass as the top 2/3rds of the rack-mount front panel so I can enjoy the bright glow of that big 1930s bottle. Here are drawings of the transmitter and station build concept:

<http://home.netcom.com/~arc5/HRO/1935stncpt.jpg>  
<http://home.netcom.com/~arc5/HRO/1935txcncpt.jpg>

The red thing under the receiver is a small op desk, which will hold the key and a small crystal rack, in which I want to put the CM-2 and BC-2 crystal holders. The TX supply will be in the rack under the table. The Plexiglass sheet has a window on the left; you can reach-in and change the crystal in \*relative\* safety. You'd have to twist your hand around and try hard to reach any B+ from the window.

Lunch is over... Back to work!

73 DE Dave AB5S

From arc5 at ix.netcom.com Fri Feb 17 12:52:46 2012

From: arc5 at ix.netcom.com (David Stinson)  
Date: Fri, 17 Feb 2012 11:52:46 -0600  
Subject: [BoatAnchors] [Boatanchors] Plexiglass and the 1935 Station Project.  
In-Reply-To: <alpine.LFD.2.02.1202171142080.2278@Frances.localdomain>  
References: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
<alpine.LFD.2.02.1202171142080.2278@Frances.localdomain>  
Message-ID: <1287DE2F2E2F4B97A7C042B3B5C21705@DaddyPC>

----- Original Message -----

From: "Jim Haynes" <jhhaynes at earthlink.net>

> It may not be wise to mount meters on Plexiglass if they are going  
> to  
> be carrying high voltage.

Very wise of you to point out, Jim, and good advice for anyone building a similar rig.  
The B+ meter in this rig will be shunted and only carry a small voltage, with a zener hidden behind to "safe" it to ground should the shunt open or the coil short to case.

> Of course the "po boy" of 1935 would not have had Plexiglass - he  
> would  
> have had to make do with window glass. And most likely would have  
> used  
> Masonite for the panels.

Very true. But I just gotta be able to see that glow. ;-)

From charlesmorris800 at centurytel.net Fri Feb 17 13:22:09 2012  
From: charlesmorris800 at centurytel.net (Charles)  
Date: Fri, 17 Feb 2012 12:22:09 -0600  
Subject: [BoatAnchors] Idle ramblings... Anyone got a BC-788 radar altimeter?  
Message-ID: <A7FDAC5C-3145-412E-A2A5-82751FA233A4@centurytel.net>

Stuck at home with a bad head cold/sinus infection. So I dug out an old I-152D indicator from under the workbench where it had been collecting dust for a very long time. After reading about J-scopes in my late father's 1952 copy of MIT's "Principles of Radar", I hooked it up to power supplies. 1 kv for the CRT, 250-300v B+, 6 volt for the three 6AG5 heaters, and a floating filament transformer for the CRT. (Sometime in the last 30 years I removed the 400 Hz HV/filament transformer for the CRT, planning to replace it with something that

would run on 60 Hz or maybe from the B+... naturally, now that I finally fixed my PP-7482/G 1 KVA 400 Hz inverter after 10 years, I can't find the darned transformer! And I never throw anything electronic away, so maybe gremlins took it. )

Anyhow, I bought a mating Amphenol connector from Mouser and traced out the pins on the front panel connector, since I don't have a schematic. Aside from AC power, B+ and ground, there are only two signal pins left. So one had to be the radial deflection and the other the trigger for the phase shifter that makes the circular trace. I figured it should need a 10 us pulse per revolution (5000 ft is one circle on the CRT, round-trip for the radar pulse is then 10,000 ft, at roughly 1000 ft/us). I connected a 100 KHz oscillator to the grid of the phase shifter tube and sure enough, got a circle display :) Applying negative-going pulses to the pip input also deflects the beam radially.

<http://i1181.photobucket.com/albums/x426/DrCharlesMorris/P2170152.jpg>  
<http://i1181.photobucket.com/albums/x426/DrCharlesMorris/P2170153.jpg>

Now I just need (besides the missing power transformer) a BC-788 to drive the indicator. Fair has it, but wants \$95 plus \$45 for a manual photocopy!... and of the two they have, and emailed me pics of, one is missing the entire IF strip :( although the other is not quite as "pretty", it looks complete). It seems as though boat-anchors are a lot more expensive than I remember. OTOWH it was 35 years ago when I bought the indicator!

-Charles

From w7qho at aol.com Fri Feb 17 13:50:35 2012  
From: w7qho at aol.com (mac)  
Date: Fri, 17 Feb 2012 10:50:35 -0800  
Subject: [BoatAnchors] [Boatanchors] Plexiglass and the 1935 Station Project.  
In-Reply-To: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
References: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
Message-ID: <D9F8D9A4-1039-488C-A822-B1B6579CEC0F@aol.com>

In which case you might consider building up a one or two tube regen to pair with the xmtr as opposed to that (very nice) HRO.

Dennis D. W7QHO  
Glendale, CA

\*\*\*\*\*



On Feb 17, 2012, at 9:24 AM, David Stinson wrote (in part):

> I'm building a 1935-era station and want it to represent  
> what a young, new ham would actually have used to  
> make his first QSOs.

From SP600 at aol.com Fri Feb 17 14:44:11 2012  
From: SP600 at aol.com (SP600 at aol.com)  
Date: Fri, 17 Feb 2012 14:44:11 -0500 (EST)  
Subject: [BoatAnchors] R-620/FRR SP-600-JX-28  
Message-ID: <13a42.1c3668c3.3c70080b@aol.com>

Hello,

I have a little information on my web site the difference between the R-274C and the R-620. Go to [\\_www.hammarlund.org\\_](http://www.hammarlund.org) (<http://www.hammarlund.org>) then go to manuals scroll down to next page then look for SP-600-JX-28/R-620/FRR

Hope this helps,

Charlie N9SOR

From nielwiegand at aggienetwork.com Fri Feb 17 21:12:32 2012  
From: nielwiegand at aggienetwork.com (Niel Wiegand)  
Date: Fri, 17 Feb 2012 20:12:32 -0600  
Subject: [BoatAnchors] Plexiglass and the 1935 Station Project.  
In-Reply-To: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
References: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
Message-ID: <4F3F0910.8030508@aggienetwork.com>

Dave,

I modeled my 1938 transmitter after a rack mounted Gross CW-25 (\$14.95 less tubes, crystal and PS in 1934) driving an amplifier. Take a look at <http://w0vlz.blogspot.com/search/label/TZ-20%20RF%20Amp>

I made the amplifier front panel only half high. There's room to mount the meters on the metal panel but the tubes can be seen over it. With the separate exciter I'm not tempted to reach in to make adjustment with the power on.

73,

Niel

David Stinson wrote:

> First- let me thank everyone for the great suggestions on working  
> Plexiglass or Lexan. These lists are the best!  
>  
> Several have asked me for more details on this,  
> and why the Plexiglass.  
>  
> I'm building a 1935-era station and want it to represent  
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> multi-transformer,  
> multi-chassis, then-state-of-the-art transmitters.  
> Well, in 1935, only guys who were rich could  
> build such a transmitter. Average young boys who were  
> in love with the magic of radio had no access to big money.  
> If they were going to have a transmitter at all, they'd have to build  
> it from scavenged parts and pieces given them by older hams. They'd  
> have one transmitting tube if they were lucky; they usually had to  
> make-do with receiver tubes. They'd build it on a wooden board,  
> not an expensive metal box. And lots of youngsters  
> worked the world with those simple transmitters.  
>  
> There are lots of those "rich man" transmitters still around  
> and they're beautiful machines, but I wanted to build  
> a typical "po-boy" rig to go with my new HRO and  
> see how it would do. While I've got it on the air now and  
> have worked several states, I've still got lots of "finishing"  
> work to do. I want to use Plexiglass as the top 2/3rds of the  
> rack-mount front panel so I can enjoy the bright  
> glow of that big 1930s bottle. Here are drawings of  
> the transmitter and station build concept:  
>  
> <http://home.netcom.com/~arc5/HRO/1935stncpt.jpg>  
> <http://home.netcom.com/~arc5/HRO/1935txcncpt.jpg>  
>  
> The red thing under the receiver is a small op desk,  
> which will hold the key and a small crystal rack,  
> in which I want to put the CM-2 and BC-2 crystal holders. The TX  
> supply will be in the rack under the table.  
> The Plexiglass sheet has a window on the left;  
> you can reach-in and change the crystal in \*relative\* safety. You'd  
> have to twist your hand  
> around and try hard to reach any B+ from the window.  
>  
> Lunch is over... Back to work!

>  
> 73 DE Dave AB5S  
>  
>  
> -----  
> BoatAnchors mailing list  
> BoatAnchors at theporch.com  
> <https://minime.theporch.com/mailman/listinfo/boatanchors>  
>

From ranickel at comcast.net Fri Feb 17 22:48:45 2012  
From: ranickel at comcast.net (Robert Nickels)  
Date: Fri, 17 Feb 2012 21:48:45 -0600  
Subject: [BoatAnchors] Plexiglass and the 1935 Station Project.  
In-Reply-To: <4F3F0910.8030508@aggienetwork.com>  
References: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
<4F3F0910.8030508@aggienetwork.com>  
Message-ID: <4F3F1F9D.9030707@comcast.net>

On 2/17/2012 8:12 PM, Niel Wiegand wrote:

>  
> I modeled my 1938 transmitter after a rack mounted Gross CW-25

Congrats on an excellent project, Niel! I was thinking of replying to Dave about my notion that the Gross style of construction ought to be pretty easy to copy, and here you've proven the point very nicely. Not only does it give the 30s vintage look, but it should be fairly easy to do using angle stock, and could be adjusted to accommodate available chassis sizes. Probably not a great choice for those with small children, curious pets, or who have trouble staying clear of HV and RF!

The dial escutcheons and Bliley crystal really add the finishing touch. Now, where do we sign up for your black wrinkle painting workshops?

73, Bob W9RAN

From k5bzh at yahoo.com Fri Feb 17 23:19:36 2012  
From: k5bzh at yahoo.com (Jim Musgrove)  
Date: Fri, 17 Feb 2012 20:19:36 -0800 (PST)  
Subject: [BoatAnchors] Plexiglass and the 1935 Station Project.  
In-Reply-To: <4F3F1F9D.9030707@comcast.net>  
References: <F6B61FBEA97D47F2ACE60A10719B7DC9@DaddyPC>  
<4F3F0910.8030508@aggienetwork.com> <4F3F1F9D.9030707@comcast.net>  
Message-ID: <1329538776.40230.YahooMailNeo@web113814.mail.gq1.yahoo.com>

Howdy to all,

?

I feel compelled to add my two cents worth, back in 1955 I got on the air as KN5BZH with an Eldico TR-75TV, ran it "high, wide, and handsome." The top cover was permanently left off to make it easier to change the coils to change bands. The 550 volts to the 1625 was fully exposed as well as the RF. Back in those days we understood to keep our fingers out of stuff. Today I would cringe at a new ham running something like that. I also cringe at a kid using a sharp pocket knife or using a 22 rifle, our world has changed.

?

73,

Jim, K5BZH

?

---

From: Robert Nickels <ranickel at comcast.net>  
To: boatanchors at theporch.com; Niel Wiegand <nielwiegand at aggienetwork.com>;  
boatanchor network <boatanchors at mailman.qth.net>  
Sent: Friday, February 17, 2012 9:48 PM  
Subject: Re: [BoatAnchors] Plexiglass and the 1935 Station Project.

On 2/17/2012 8:12 PM, Niel Wiegand wrote:

>

> I modeled my 1938 transmitter after a rack mounted Gross CW-25

Congrats on an excellent project, Niel! I was thinking of replying to Dave about my notion that the Gross style of construction ought to be pretty easy to copy, and here you've proven the point very nicely. Not only does it give the 30s vintage look, but it should be fairly easy to do using angle stock, and could be adjusted to accommodate available chassis sizes. Probably not a great choice for those with small children, curious pets, or who have trouble staying clear of HV and RF!

The dial escutcheons and Bliley crystal really add the finishing touch. Now, where do we sign up for your black wrinkle painting workshops?

73, Bob W9RAN

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BoatAnchors mailing list  
BoatAnchors at theporch.com  
<https://minime.theporch.com/mailman/listinfo/boatanchors>

From kd5byb at kd5byb.net Sat Feb 18 10:18:46 2012  
From: kd5byb at kd5byb.net (Ben Hall)  
Date: Sat, 18 Feb 2012 09:18:46 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX>

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP>

<4F38038C.6000809@kd5byb.net>

<000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX>

Message-ID: <4F3FC156.2090109@kd5byb.net>

Good morning all,

Thanks much for the continued discussion on my little project. Been reading all the replies and I apologize that I've not been able to reply to all of them. It's been a very busy week at work - found at that my group is being moved to another set of buildings ASAP. Good news is that we get a lot more space, bad news is that I get to coordinate the move.

I actually got home before 7pm last night so spent about an hour or two working on the design.

> The only thing that catches my eye is the zener diode current limiter. I  
> would add the standard BJT current limiter where the current limit threshold  
> is determined by base-emitter forward voltage and the voltage gain will take  
> up the slop in the MOSFET's gate voltage uncertainty. Or else tweak R8 for  
> the particular MOSFET(s) you have chosen. You will still need zener VD1 to  
> protect the MOSFET gate from excessive gate-source voltage.

I replaced the zener limiter with a BJT limiter in the design last night. I wasn't real thrilled with the "fiddlyness" of the zener design anyways. ;) The only downside I've found with the BJT limiter is that the sense resistor becomes smaller. Can't find that page of my calculations, but I think I'm now looking at a 3 or 4 ohm resistor to limit between 150ma to 200ma.

> For your 500 volt supply you may need VT1 to be higher in collector-emitter  
> sustaining voltage. You can probably find a MJE13003 that will easily  
> sustain 500 volts collector-emitter with the base open.

The MJE has been replaced with a BUL216 - 800V C to E max voltage. I'd really like something that was 1000V C to E max, but it seems that once I get about 800V, they get scarce and expensive.

> The body diode of the MOSFET will protect it during shut-down.  
>  
> With a higher drain-source voltage drop you may need to increase the  
> dissipation reserve by parallelling devices to keep things within their safe  
> operating areas (SOA).

This is my next major area of concern in this design. Looking at a TO-247 package MOSFET, thermal resistance (junction to sink) is right around 1 degree C / watt. I've found some heat-sinks that will do 3.3 deg C / watt, for a total of 4.3 deg C per watt. While the one I'm looking at is a 150 deg C max part, I'd like to stay under 100 deg C. So I'm limited to about 23 watts (very conservative) dissipation on this particular part.

If I assume that short-circuit voltage will be 600 volts (very conservative) and limited to 200 mA, that's 120 watts. Ouch.

Looking around, I can find some surplus 1000V MOSFETs (like the APT10043JVR) that are in a SOT-227 package (quite large). This particular unit is 0.25 deg C/watt, 150 deg C max, and I'd like to limit that to 100 deg C. This requires a much larger heat sink, and for giggles I picked one used on one of the ARRL Homebrew Challenge amplifiers. It's 1 deg C / watt. So, I'm probably looking at 1.5 watts/deg C with this bad-boy. 66.7 watts is the max she'll do, even in this gigantic package. The physics of heat transfer are working against me! ;)

So it appears that designing for a continuous short-circuit may not be sensible. So perhaps I need to think along these lines:

Let's say I set the current limit at 300mA and I fuse the B+ with a 150mA fast-acting fuse. Littelfuse says that a 200%, their 150mA 312/318 series fast-acting fuse opens up in 5 seconds, maximum. So it's now a race - does the fuse open up before I blow up the MOSFET?

I've got to think about this.

Maybe the thing I need to do is put a thermal switch on the heat sink that also causes the crowbar to fire? Again, the question becomes will the thermal switch function the crowbar before I'd blown up the MOSFET?

Got to think about this too. This becomes a transient thermal problem...

> Keep in mind a crowbar is for protecting the load, not the power supply. If  
> invoked you'll need to replace a few parts. Fuse the unregulated voltage  
> into the pass transistor.

Completely agree here - if something sets off the crowbar, I've got troubleshooting to do as I need to figure out what happened and caused the crowbar to fire...

thanks much and 73,  
ben, kd5byb

From jim.isbell at gmail.com Sat Feb 18 13:11:53 2012  
From: jim.isbell at gmail.com (Jim Isbell, W5JAI)  
Date: Sat, 18 Feb 2012 12:11:53 -0600  
Subject: [BoatAnchors] HP 8116A Function Generator  
Message-ID: <CAB+LbZA4BQF-yqrUuhUsNyKbi3sbsDsW1cwRYX9ZP7BGh3TPCw@mail.gmail.com>

I just got one, in working condition, from a thrift shop for \$30. I didnt know anything about it except that I was sure it was worth \$30 even if it didnt work.

But now I see it as the basis for a frequency agile transmitter from 160 meters up to 6 meters. All I would need is an amplifier-modulator and an antenna matching circuit. Right??

Jim Isbell  
TheFreeRepublic.Blogstream.com  
[www.youtube.com/watch?v=BFtoaMM1ChY&feature=related](http://www.youtube.com/watch?v=BFtoaMM1ChY&feature=related)  
[www.youtube.com/watch?v=dyjJ3Fw0nSQ](http://www.youtube.com/watch?v=dyjJ3Fw0nSQ)  
[www.facebook.com/pages/Trinity-Base-in-Defense-of-our-Republic/113905168677365?v=wall](http://www.facebook.com/pages/Trinity-Base-in-Defense-of-our-Republic/113905168677365?v=wall)  
[www.facebook.com/profile.php?id=100000010609777](http://www.facebook.com/profile.php?id=100000010609777)  
[www.AmericanMajority.org](http://www.AmericanMajority.org)  
[www.redstate.com](http://www.redstate.com)  
[TheFreeRepublic2.blogspot.com](http://TheFreeRepublic2.blogspot.com)

Beware the man who only carries one gun. HE PROBABLY KNOWS HOW TO USE IT!!!

From gumbear at pacbell.net Sat Feb 18 14:07:28 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Sat, 18 Feb 2012 11:07:28 -0800  
Subject: [BoatAnchors] Power Supply Regulators...  
References:  
<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP>  
    <4F38038C.6000809@kd5byb.net>  
    <000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX>  
    <4F3FC156.2090109@kd5byb.net>  
Message-ID: <002001ccee70\$93088a20\$529e480c@KB6NAX>

Hi Ben,

Good questions.

> ...So it appears that designing for a continuous short-circuit may not be

sensible. So perhaps I need to think along these lines:

Let's say I set the current limit at 300mA and I fuse the B+ with a 150mA fast-acting fuse. Littelfuse says that a 200%, their 150mA 312/318 series fast-acting fuse opens up in 5 seconds, maximum. So it's now a race - does the fuse open up before I blow up the MOSFET? .....

The nice thing about MOSFET's is they aren't subject to second breakdown effect that can be triggered by transient conditions. An overload won't likely cause that but a load connection that becomes intermittent can produce flyback voltage transients. The output capacitor will help suppress that but not perfectly, a big transient can still get to the transistor. You can still blow a MOSFET if the transient couples enough energy through the drain-channel-source-gate capacitance to short the gate to the channel. And of course if the current exceeds the device safe operating area (SOA) enough to cause internal heating long enough to destroy the device before protection takes effect your goose is cooked. Yes, it's a race between the fuse and MOSFET to see who blows first. In Murphy's scenario they both will blow! But broken power supply is better than smoked boatanchor. The best way to get conservative management is to keep the operating drain-source voltage as low as possible while meeting low line level max output current regulation. That way the temp rise-time product will be the best in your favor. Fuses are cheap, better a few blown ones than one that waits until something else blows.

Arden

From bill at iaxs.net Sat Feb 18 19:23:21 2012

From: bill at iaxs.net (Bill Hawkins)

Date: Sat, 18 Feb 2012 18:23:21 -0600

Subject: [BoatAnchors] Power Supply Regulators...

In-Reply-To: <002001ccee70\$93088a20\$529e480c@KB6NAX>

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net>

<002001ccee70\$93088a20\$529e480c@KB6NAX>

Message-ID: <AE38D1FC362B43778886753631E94665@cyrus>

On the other hand, 807s just glow red until the fuse blows.

Don't recall reading the output specs for this device.

Bill Hawkins



-----Original Message-----

From: Arden Allen

Sent: Saturday, February 18, 2012 1:07 PM

To: Ben Hall

Cc: boatanchors at theporch.com

Subject: Re: [BoatAnchors] Power Supply Regulators...

Hi Ben,

Good questions.

> ...So it appears that designing for a continuous short-circuit may not be sensible. So perhaps I need to think along these lines:

Let's say I set the current limit at 300mA and I fuse the B+ with a 150mA fast-acting fuse. Littelfuse says that a 200%, their 150mA 312/318 series fast-acting fuse opens up in 5 seconds, maximum. So it's now a race - does the fuse open up before I blow up the MOSFET? .....

From arc5 at ix.netcom.com Sat Feb 18 21:56:54 2012

From: arc5 at ix.netcom.com (David Stinson)

Date: Sat, 18 Feb 2012 20:56:54 -0600

Subject: [BoatAnchors] Having Too Much Fun....

Message-ID: <4A8CE58C1C9645B2946570C83E53E425@DaddyPC>

I'm having way too much fun with this "hillbilly" rig ;-)

<http://home.netcom.com/~arc5/HR0/transmitters.jpg>

Sorry for the poor cell-phone camera quality.

The two meters are General Electric, surface mounted and came from a DC charging panel that provided 150 VDC at up to 300 amps. Shunts were external, so I just "re-shunted" them for this rig.

I've been told the meters were circa 1910s or 1920s.

Can anyone confirm or provide another opinion?

TNX ES 73 DE Dave AB5S

From kd5byb at kd5byb.net Sun Feb 19 10:44:47 2012

From: kd5byb at kd5byb.net (Ben Hall)  
Date: Sun, 19 Feb 2012 09:44:47 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <AE38D1FC362B43778886753631E94665@cyrus>  
References:  
<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net>  
    <002001ccee70\$93088a20\$529e480c@KB6NAX>  
    <AE38D1FC362B43778886753631E94665@cyrus>  
Message-ID: <4F4118EF.4030503@kd5byb.net>

Good morning all,

Got a whole lot done yesterday / this morning. Got out a piece of circuit board material, laid the circuit out, drilled holes for terminals and made "islands" with a wood drill bit.

It's now ready for testing...

<<http://www.kd5byb.net/HVTEST/HVregtest.jpg>>

thanks much and 73,  
ben, kd5byb

From kd5byb at kd5byb.net Sun Feb 19 11:52:22 2012  
From: kd5byb at kd5byb.net (Ben Hall)  
Date: Sun, 19 Feb 2012 10:52:22 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <4F4118EF.4030503@kd5byb.net>  
References:  
<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net>  
    <002001ccee70\$93088a20\$529e480c@KB6NAX>  
    <AE38D1FC362B43778886753631E94665@cyrus>  
    <4F4118EF.4030503@kd5byb.net>  
Message-ID: <4F4128C6.9090909@kd5byb.net>

And just tested it, after correcting a wiring error. Works well! Set it up for 280 volts out, got 272. Set the current limit for 22mA, it limited at 24mA.

Next up: the crowbar circuitry. :)

Once I get everything working right at 270 volts out, I'll rework it or build a new version setup for 500 VDC output. :)

thanks much and 73,  
ben, kd5byb

On 2/19/2012 9:44 AM, Ben Hall wrote:

> Good morning all,  
>  
> Got a whole lot done yesterday / this morning. Got out a piece of  
> circuit board material, laid the circuit out, drilled holes for  
> terminals and made "islands" with a wood drill bit.  
>  
> It's now ready for testing...  
>  
> <<http://www.kd5byb.net/HVTEST/HVregtest.jpg>>  
>  
> thanks much and 73,  
> ben, kd5byb  
> -----  
> BoatAnchors mailing list  
> BoatAnchors at theporch.com  
> <https://minime.theporch.com/mailman/listinfo/boatanchors>  
>  
>

From kd5byb at kd5byb.net Sun Feb 19 16:01:09 2012

From: kd5byb at kd5byb.net (Ben Hall)

Date: Sun, 19 Feb 2012 15:01:09 -0600

Subject: [BoatAnchors] Power Supply Regulators...

In-Reply-To: <4F4128C6.9090909@kd5byb.net>

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net>

<002001ccee70\$93088a20\$529e480c@KB6NAX>

<AE38D1FC362B43778886753631E94665@cyrus>

<4F4118EF.4030503@kd5byb.net> <4F4128C6.9090909@kd5byb.net>

Message-ID: <4F416315.2000601@kd5byb.net>

Afternoon all,

Here is a diagram for what I tested this morning - got a few requests

for it...

<<http://www.kd5byb.net/HVTEST/revised.pdf>>

It's NOT a finished product - no overvoltage protection crowbar, etc...

thanks much and 73,  
ben, kd5byb

From gumbear at pacbell.net Sun Feb 19 16:07:14 2012

From: gumbear at pacbell.net (Arden Allen)

Date: Sun, 19 Feb 2012 13:07:14 -0800

Subject: [BoatAnchors] Power Supply Regulators...

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net><002001ccee70\$93088a20\$529e480c@KB6NAX><AE38D1FC362B43778886753631E94665@cyrus><4F4118EF.4030503@kd5byb.net>

<4F4128C6.9090909@kd5byb.net> <4F416315.2000601@kd5byb.net>

Message-ID: <001a01cccf4a\$7d4712d0\$e19e480c@KB6NAX>

Ben! YOU STILL NEED THE SOURCE-GATE ZENER DIODE TO KEEP THE GATE FROM EXCEEDING ITS VOLTAGE LIMIT (PROBABLY ABOUT 40 VOLTS MAX WITH RESPECT TO THE SOURCE). IN THE EVENT OF A TRANSIENT OF SOME SORT THE ZENER CLAMPS THE GATE AT THE ZENER'S VOLTAGE.

Arden

> ....Afternoon all,

Here is a diagram for what I tested this morning - got a few requests for it...

<<http://www.kd5byb.net/HVTEST/revised.pdf>>

It's NOT a finished product - no overvoltage protection crowbar, etc...

thanks much and 73,  
ben, kd5byb

From gumbear at pacbell.net Sun Feb 19 16:13:55 2012

From: gumbear at pacbell.net (Arden Allen)

Date: Sun, 19 Feb 2012 13:13:55 -0800

Subject: [BoatAnchors] Power Supply Regulators...

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net><002001ccee70\$93088a20\$529e480c@KB6NAX><AE38D1FC362B43778886753631E94665@cyrus><4F4118EF.4030503@kd5byb.net>

<4F4128C6.9090909@kd5byb.net> <4F416315.2000601@kd5byb.net>

Message-ID: <001e01cccef4b\$68c33130\$e19e480c@KB6NAX>

Oh, BTW, Ben, looking at your schematic of the IRF432 the body diode is drawn as a zener diode. I think it means that the MOSFET is a controlled avalanche device, i.e., there is a spec on what would be normally considered to be the breakdown voltage. Spec'ing the actual breakdown (avalanche) voltage gives the designer the option of having the device also serve to clamp overshoots in inductive circuits, switchers primarily.

Arden

> ...Afternoon all,

Here is a diagram for what I tested this morning - got a few requests for it...

<http://www.kd5byb.net/HVTEST/revised.pdf>

.....

From kd5byb at kd5byb.net Sun Feb 19 17:36:28 2012

From: kd5byb at kd5byb.net (Ben Hall)

Date: Sun, 19 Feb 2012 16:36:28 -0600

Subject: [BoatAnchors] Power Supply Regulators...

In-Reply-To: <001e01cccef4b\$68c33130\$e19e480c@KB6NAX>

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net><002001ccee70\$93088a20\$529e480c@KB6NAX><AE38D1FC362B43778886753631E94665@cyrus><4F4118EF.4030503@kd5byb.net>

<4F4128C6.9090909@kd5byb.net> <4F416315.2000601@kd5byb.net>

<001e01cccef4b\$68c33130\$e19e480c@KB6NAX>

Message-ID: <4F41796C.1020109@kd5byb.net>

Hi Arden and all,

The schematic symbol is one I grabbed while not paying attention. The IRF431 does not have a zener body diode - and I forgot to add one to the original circuit! Which, I really don't understand, as I have it written down in my notes.

Thanks for the good catch!!!

Looking back at the IRF431 data sheet, it gives a +/- 20 VDC max rating on the gate to source voltage. Pretty sure I've got some 15V zeners around here some place...

thanks much and 73,  
ben, kd5byb

On 2/19/2012 3:13 PM, Arden Allen wrote:

> Oh, BTW, Ben, looking at your schematic of the IRF432 the body diode is  
> drawn as a zener diode. I think it means that the MOSFET is a controlled  
> avalanche device, i.e., there is a spec on what would be normally considered  
> to be the breakdown voltage. Spec'ing the actual breakdown (avalanche)  
> voltage gives the designer the option of having the device also serve to  
> clamp overshoots in inductive circuits, switchers primarily.

>

> Arden

>

>

>> ...Afternoon all,

>

> Here is a diagram for what I tested this morning - got a few requests  
> for it...

>

> <http://www.kd5byb.net/HVTEST/revised.pdf>

>

> .....

>

>

>

From kd5byb at kd5byb.net Sun Feb 19 17:51:30 2012

From: kd5byb at kd5byb.net (Ben Hall)

Date: Sun, 19 Feb 2012 16:51:30 -0600

Subject: [BoatAnchors] Power Supply Regulators...

In-Reply-To: <4F41796C.1020109@kd5byb.net>

References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d

39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net><002001ccee70\$93088a20\$529e480c@KB6NAX><AE38D1FC362B43778886753631E94665@cyrus><4F4118EF.4030503@kd5byb.net>  
<4F4128C6.9090909@kd5byb.net> <4F416315.2000601@kd5byb.net>  
<001e01ccef4b\$68c33130\$e19e480c@KB6NAX>  
<4F41796C.1020109@kd5byb.net>  
Message-ID: <4F417CF2.4000406@kd5byb.net>

Evening all,

Updated schematic with gate to source zener.

<<http://www.kd5byb.net/HVTEST/revised.pdf>>

thanks much and 73,  
ben, kd5byb

From bill at iaxs.net Sun Feb 19 19:44:58 2012  
From: bill at iaxs.net (Bill Hawkins)  
Date: Sun, 19 Feb 2012 18:44:58 -0600  
Subject: [BoatAnchors] Power Supply Regulators...  
In-Reply-To: <4F416315.2000601@kd5byb.net>  
References:

<4F2DC4DA.1020104@kd5byb.net><001501cce3c6\$0abdea70\$9f9e480c@KB6NAX><4F3078A1.6080100@kd5byb.net><FEE1B23414AA4245B84281BC88FCA384@WORKSHOP><001201cce8be\$d7c3b7a0\$d39e480c@KB6NAX><4F36A0CA.3050403@earthlink.net><D281FC19E6074303AB4FFA5CC5131E3C@WORKSHOP><4F38038C.6000809@kd5byb.net><000b01cce9f2\$b0b5be80\$0e9e480c@KB6NAX><4F3FC156.2090109@kd5byb.net><002001ccee70\$93088a20\$529e480c@KB6NAX><AE38D1FC362B43778886753631E94665@cyrus><4F4118EF.4030503@kd5byb.net>  
<4F4128C6.9090909@kd5byb.net> <4F416315.2000601@kd5byb.net>  
Message-ID: <8B1DF714C82F453A85991BD691FB6B2F@cyrus>

Didn't the word "crowbar" come from what you tossed into the open copper bus bars of a 50 KW transmitter PS to cure a problem? Or to be sure it was dead?

If I was doing a crowbar for this supply (tubes don't need crowbars) I'd hook the anode of the SCR to the supply ahead of the expensive bit of sand. Bit rough on the rectifier diodes, but it will blow the line fuse (neither of which are shown in the diagram).

Bill Hawkins

-----Original Message-----  
From: Ben Hall

Sent: Sunday, February 19, 2012 3:01 PM

Here is a diagram for what I tested this morning - got a few requests for it...

<<http://www.kd5byb.net/HVTEST/revised.pdf>>

It's NOT a finished product - no overvoltage protection crowbar, etc...

From navy.radio at gmail.com Mon Feb 20 09:37:17 2012

From: navy.radio at gmail.com (Nick England)

Date: Mon, 20 Feb 2012 09:37:17 -0500

Subject: [BoatAnchors] Canadian Marconi 500w transmitter - NOS components

Message-ID: <CAB55hNcw\_5hmVGJ9a-\_6YMYa1Rkj8p4=rs0ufo6vHFnz3ZzkGQ@mail.gmail.com>

Howdy gang - This gear is located near Niagara Falls.

AM-5007/Frt-501 - RF Deck 2x 4-125 modulated by 2x 4-125?

T-5006/Frt-501 - exciter - xtal controled

PP-5009/Frt-501 - HV p/s deck

TN-5002/Frt-501 - Antenna Tuner

-unfortunately there is no heavy iron there, just NOS chassis with nifty components

Also an AN/UPM-502 transponder test set

I don't know the seller, just got e-mail from him last night because I have a US Navy Radio web site ([www.navy-radio.com](http://www.navy-radio.com))

I have posted his photos on line at <http://www.virhistory.com/ham/frt501.htm>  
Contact Troy at troyez66 at me.com

73 & Have Fun,  
Nick K4NYW

From n7rk at cox.net Mon Feb 20 13:18:33 2012

From: n7rk at cox.net (David Hollander)

Date: Mon, 20 Feb 2012 11:18:33 -0700

Subject: [BoatAnchors] Unusual SP-200 Super Pro???

Message-ID: <4F428E79.1060305@cox.net>

This Super Pro radio followed me home while cleaning out a shipping container.

Is this Super Pro anything unusual or did someone paint the dial windows



blue and replace the knobs with more modern knobs?

Sadly the radio has a lot of rust. I do have the cover which attaches to the front panel but I removed it for the photos

Here are three photos.

<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro.jpg>  
<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro2.jpg>  
<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro3.jpg>

Tnx and 73,

Dave N7RK

--

\*\*\*\*\*  
Dave N7RK                      Boatanchors Home Page: <http://n7rk.com>  
Phoenix, Arizona              \*DXCC Honor Roll\*      \*WAZ#22 - 75 Meter SSB\*

ex-XE2/N7RK, N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor and Antique Radio Collector

From a.b.bonds at Vanderbilt.Edu Mon Feb 20 14:00:30 2012  
From: a.b.bonds at Vanderbilt.Edu (Bonds, A B)  
Date: Mon, 20 Feb 2012 13:00:30 -0600  
Subject: [BoatAnchors] Unusual SP-200 Super Pro???  
In-Reply-To: <4F428E79.1060305@cox.net>  
References: <4F428E79.1060305@cox.net>  
Message-ID: <05360D81BEC7394D935D3F2F821B0EF701276DE5EC@its-hcwnem03.ds.Vanderbilt.edu>

Dave,

It appears that the blue paint was part of the "modernization". Every other one I've seen had black escutcheons.

Don't be put off by the rust. Those sets are astoundingly robust--the bandswitch is a work of art. By the time I was done with mine it was delivering 0.18 uV for 10 dB S+N/N.

A. B. Bonds

-----Original Message-----

From: boatanchors-bounces at theporch.com [mailto:boatanchors-bounces at

theporch.com] On Behalf Of David Hollander

Sent: Monday, February 20, 2012 12:19 PM

To: BOATANCHORS; Boatanchors at puck.nether.net; Old Tube Radios; Discussion of AM Radio

Subject: [BoatAnchors] Unusual SP-200 Super Pro???

This Super Pro radio followed me home while cleaning out a shipping container.

Is this Super Pro anything unusual or did someone paint the dial windows blue and replace the knobs with more modern knobs?

Sadly the radio has a lot of rust. I do have the cover which attaches to the front panel but I removed it for the photos

Here are three photos.

<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro.jpg>

<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro2.jpg>

<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro3.jpg>

Tnx and 73,

Dave N7RK

--

\*\*\*\*\*

Dave N7RK Boatanchors Home Page: <http://n7rk.com>

Phoenix, Arizona \*DXCC Honor Roll\* \*WAZ#22 - 75 Meter SSB\*

ex-XE2/N7RK, N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor and Antique Radio Collector

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BoatAnchors mailing list

BoatAnchors at theporch.com

<https://minime.theporch.com/mailman/listinfo/boatanchors>

From provero at ct.metrocast.net Mon Feb 20 17:26:08 2012

From: provero at ct.metrocast.net (P.J. Rovero)

Date: Mon, 20 Feb 2012 17:26:08 -0500

Subject: [BoatAnchors] Unusual SP-200 Super Pro???

Message-ID: <61559.1329776768@ct.metrocast.net>

On Mon 02/20/12 13:18 , David Hollander <n7rk at cox.net> wrote:

> This Super Pro radio followed me home while cleaning out a shipping  
> container. ....

> Here are three photos.

> <http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro.jpg>

> <http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro2.jpg>

> <http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro3.jpg>

I haven't seen a patent/license label like the one in the 3rd photo  
on any of my other SP-200/400 receivers...

P.J. "Josh" Rovero                      Ham Radio: KK1D

Web:        <http://sites.google.com/site/roveroresearch/>

From arc5 at ix.netcom.com   Mon Feb 20 18:23:51 2012

From: arc5 at ix.netcom.com (David Stinson)

Date: Mon, 20 Feb 2012 17:23:51 -0600

Subject: [BoatAnchors] LF/MF Coils for HRO SR.?

Message-ID: <EEF7CC9B18BF45F1A3DC9390F517F6DC@DaddyPC>

Were LF/MF Coils made for the HRO SR.?

From laffitte at prtc.net   Mon Feb 20 18:28:23 2012

From: laffitte at prtc.net (Guido)

Date: Mon, 20 Feb 2012 18:28:23 -0500

Subject: [BoatAnchors] Unusual SP-200 Super Pro???

In-Reply-To: <61559.1329776768@ct.metrocast.net>

References: <61559.1329776768@ct.metrocast.net>

Message-ID: <B23F401678444062AAEE594858452028@GuidoPC>

The chassis is rusted in the same area as the one I restored some years ago  
and is still in my shack. This one is an SP210SX. I have seen three of them  
with the same rust pattern in the chassis. Makes one wonder.

73s

Guido KP4FAR

-----Original Message-----

From: P.J. Rovero

Sent: Monday, February 20, 2012 5:26 PM

To: David Hollander ; BOATANCHORS ; Boatanchors at puck.nether.net ; Old Tube  
Radios ; Discussion of AM Radio

Subject: Re: [BoatAnchors] Unusual SP-200 Super Pro???

On Mon 02/20/12 13:18 , David Hollander <n7rk at cox.net> wrote:

> This Super Pro radio followed me home while cleaning out a shipping  
> container. ....

> Here are three photos.

> <http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro.jpg>

> <http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro2.jpg>

> <http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro3.jpg>

I haven't seen a patent/license label like the one in the 3rd photo  
on any of my other SP-200/400 receivers...

P.J. "Josh" Rovero                      Ham Radio: KK1D

Web:        <http://sites.google.com/site/roveroresearch/>

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BoatAnchors mailing list

BoatAnchors at theporch.com

<https://minime.theporch.com/mailman/listinfo/boatanchors>

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No virus found in this message.

Checked by AVG - [www.avg.com](http://www.avg.com)

Version: 10.0.1424 / Virus Database: 2112/4821 - Release Date: 02/20/12

From n7rk at cox.net   Mon Feb 20 19:12:37 2012

From: n7rk at cox.net (David Hollander)

Date: Mon, 20 Feb 2012 17:12:37 -0700

Subject: [BoatAnchors] Unusual SP-200 Super Pro???

In-Reply-To: <B23F401678444062AAEE594858452028@GuidoPC>

References: <61559.1329776768@ct.metrocast.net>

          <B23F401678444062AAEE594858452028@GuidoPC>

Message-ID: <4F42E175.1080200@cox.net>

Hi Guido - what is the difference between an SP-210X and a SP-200?

Tnx and 73,

Dave N7RK

--

\*\*\*\*\*

Dave N7RK                      Boatanchors Home Page: <http://n7rk.com>

Phoenix, Arizona                \*DXCC Honor Roll\*        \*WAZ#22 - 75 Meter SSB\*

ex-XE2/N7RK, N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor and Antique Radio Collector

From al at ar88.net Mon Feb 20 19:16:51 2012  
From: al at ar88.net (Al Klase)  
Date: Mon, 20 Feb 2012 19:16:51 -0500  
Subject: [BoatAnchors] Unusual SP-200 Super Pro???  
In-Reply-To: <4F42E175.1080200@cox.net>  
References: <61559.1329776768@ct.metrocast.net>  
<B23F401678444062AAEE594858452028@GuidoPC>  
<4F42E175.1080200@cox.net>  
Message-ID: <4F42E273.70904@ar88.net>

Dave,

Technically the "X" stands for crystal filter, but don't think I've ever seen one without.

Breakdown of Super-Pro part number on my site here:  
[http://www.skywaves.ar88.net/commrx/Hammarlumd/SP-10/Super-Pro\\_Data.html](http://www.skywaves.ar88.net/commrx/Hammarlumd/SP-10/Super-Pro_Data.html)

Al

On 2/20/2012 7:12 PM, David Hollander wrote:  
> Hi Guido - what is the difference between an SP-210X and a SP-200?  
>  
> Tnx and 73,  
>  
> Dave N7RK  
>

--

Al Klase - N3FRQ  
Jersey City, NJ  
<http://www.skywaves.ar88.net/>

From scb at hiwaay.net Tue Feb 21 13:32:32 2012  
From: scb at hiwaay.net (scb at hiwaay.net)  
Date: Tue, 21 Feb 2012 12:32:32 -0600  
Subject: [BoatAnchors] Re; Unusual SP-200 Super Pro???  
Message-ID: <20120221123232.68011nz3kb5dkn5s@webmail.hiwaay.net>

Greetings Dave & Gp;

You have to wonder if the operator used Channellock pliers to change bands with that utterly useless knob unless the detent was disabled. As mine was missing I put an oversized version of the same style as-original Dakaware knob on my BC-1004C/ 210X and I need all of it to change bands \*after\* lubing the mech.  
Rgds; Steve Bringhurst

Subject: [BoatAnchors] Unusual SP-200 Super Pro???

Message: 1

This Super Pro radio followed me home while cleaning out a shipping container.

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<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro3.jpg>

Tnx and 73,

Dave N7RK

From Paul.Thekan at cpaii.com Tue Feb 21 14:11:01 2012

From: Paul.Thekan at cpaii.com (Thekan, Paul)

Date: Tue, 21 Feb 2012 11:11:01 -0800

Subject: [BoatAnchors] Re; Unusual SP-200 Super Pro???

In-Reply-To: <20120221123232.68011nz3kb5dkn5s@webmail.hiwaay.net>

References: <20120221123232.68011nz3kb5dkn5s@webmail.hiwaay.net>

Message-ID: <7EC59351BB5C644E80AB7A434394DFF0EA62517D@Torreypines.cpaii.com>

Looks like a 'cosmetically challenged' BC 779 or BC 1004 with the paint job and newer knobs as you said Dave.

Paul  
N6FEG

-----Original Message-----

From: boatanchors-bounces at theporch.com [mailto:boatanchors-bounces at theporch.com] On Behalf Of scb at hiwaay.net

Sent: Tuesday, February 21, 2012 10:33 AM  
To: boatanchors at theporch.com  
Subject: [BoatAnchors] Re; Unusual SP-200 Super Pro???

Greetings Dave & Gp;  
You have to wonder if the operator used Channelock pliers to change bands with that utterly useless knob unless the detent was disabled. As mine was missing I put an oversized version of the same style as-original Dakaware knob on my BC-1004C/ 210X and I need all of it to change bands \*after\* lubing the mech.  
Rgds; Steve Bringhurst

Subject: [BoatAnchors] Unusual SP-200 Super Pro???  
Message: 1

This Super Pro radio followed me home while cleaning out a shipping container.

Is this Super Pro anything unusual or did someone paint the dial windows blue and replace the knobs with more modern knobs?

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Here are three photos.

<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro.jpg>  
<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro2.jpg>  
<http://www.arizonatubesupply.com/n7rk.com/radiostuff9/superpro3.jpg>

Tnx and 73,

Dave N7RK

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BoatAnchors mailing list  
BoatAnchors at theporch.com  
<https://minime.theporch.com/mailman/listinfo/boatanchors>  
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This message, including any attachments, may include privileged, confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient(s) is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.

From bob at nofrowns.net Tue Feb 21 15:07:38 2012  
From: bob at nofrowns.net (Bob Jackson)  
Date: Tue, 21 Feb 2012 14:07:38 -0600  
Subject: [BoatAnchors] Free Tubes  
Message-ID: <8368DAC845ED4BA1A09441BDA3A35666@c1408123a>

Well, almost free. I have 5 x 25Z5 tubes, all tested "good" that I have zero use for. Accordingly, the first to speak may have them for postage - likely \$3 or less CONUS.

Bob AG5X

From bob at nofrowns.net Tue Feb 21 17:41:49 2012  
From: bob at nofrowns.net (Bob Jackson)  
Date: Tue, 21 Feb 2012 16:41:49 -0600  
Subject: [BoatAnchors] No more calls - we have a winner!  
Message-ID: <C57C2BF4C85B4DFDBAFA7B448384C5DD@c1408123a>

I guess I shouldn't have stepped away from the 'puter. The first to reply was Steve Mulder @ 2:16 pm according to my email pgm. Thanks to all that responded, I really didn't want to just toss them. They'd been listed twice on eBay with no takers.

Bob AG5X

From knjhanlon at msn.com Tue Feb 21 18:01:58 2012  
From: knjhanlon at msn.com (JAMES HANLON)  
Date: Tue, 21 Feb 2012 16:01:58 -0700  
Subject: [BoatAnchors] LF/MF Coils for HRO SR.?  
Message-ID: <SNT106-W2837E9527C1035EB4AE192A0670@phx.gbl>

Yes, LF/MF coils were made for the HRO Senior. They have the same coverage as the LF/MF coils for the later HRO models.

Coil E: 860 to 2090 kHz  
Coil F: 480 to 960 kHz  
Coil G: 175 to 435 kHz  
Coil H: 95 to 200 kHz  
Coil J: 48 to 100 kHz

Jim, W8KGI

From chuck at chuckg.com Wed Feb 22 19:36:42 2012  
From: chuck at chuckg.com (Chuck Grandgent)



Date: Wed, 22 Feb 2012 19:36:42 -0500

Subject: [BoatAnchors] trying to find a QST article

Message-ID: <CAAPzMSZ29gB26MNCwGVTJymfdq3r70my1vawt8Ep5PWsbH9vmg@mail.gmail.com>

It's driving me nuts. I have a copy of the article SOMEWHERE, but it is HIDING from me.

It was 1960's QST, probably between 1964 and 1968.

It was an article on a lightning storm tracking circuit.

Simple circuit, it used two loop antennas, and basically fed the amplified and detected voltages to horizontal and vertical of a 3JP1 CRT.

I have almost every single QST from 1964 - 1970, and so far can't find it.

Always fun looking through those QSTs though.

Have also searched using the ARRL QST archives, and Googled, with no luck.

Anybody remember anything about this ?

Chuck, K10M, Alachua, Florida

From chuck at chuckg.com Wed Feb 22 21:03:52 2012

From: chuck at chuckg.com (Chuck Grandgent)

Date: Wed, 22 Feb 2012 21:03:52 -0500

Subject: [BoatAnchors] found it ! Re: trying to find a QST article

Message-ID: <CAAPzMSYmN5JRxwQxo7Qtv-9\_92fUjf3iGg+AR\_KbTt-gsL0T0A@mail.gmail.com>

"An Electronic Storm Finder", Thomas P. Leary, W0VTP, June 1964

[http://p1k.arrl.org/pubs\\_archive/46750](http://p1k.arrl.org/pubs_archive/46750)

Chuck, K10M

On Wed, Feb 22, 2012 at 7:36 PM, Chuck Grandgent <chuck at chuckg.com> wrote:

> It's driving me nuts. I have a copy of the article SOMEWHERE, but it is

> HIDING from me.

>

> It was 1960's QST, probably between 1964 and 1968.

> It was an article on a lightning storm tracking circuit.

> Simple circuit, it used two loop antennas, and basically fed the amplified

> and detected voltages to horizontal and vertical of a 3JP1 CRT.

>

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> it. Always fun looking through those QSTs though.

> Have also searched using the ARRL QST archives, and Googled, with no luck.

>

> Anybody remember anything about this ?

>  
> Chuck, K10M, Alachua, Florida  
>  
>

From gumbear at pacbell.net Thu Feb 23 11:51:02 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Thu, 23 Feb 2012 08:51:02 -0800  
Subject: [BoatAnchors] No More Bridge Tolls  
Message-ID: <002901ccf24b\$597b8d00\$179f480c@KB6NAX>

Boatanchorites,

I just created a petition: NO MORE BRIDGE TOLLS!, because I care deeply about this very important issue.

I'm trying to collect 1000000 signatures, and I could really use your help.

To read more about what I'm trying to do and to sign my petition, click here:

<http://www.change.org/petitions/no-more-bridge-tolls>

It'll just take a minute!

Once you're done, please ask your friends to sign the petition as well. Grassroots movements succeed because people like you are willing to spread the word!

Arden  
KB6NAX

From bill at iaxs.net Thu Feb 23 14:02:36 2012  
From: bill at iaxs.net (Bill Hawkins)  
Date: Thu, 23 Feb 2012 13:02:36 -0600  
Subject: [BoatAnchors] No More Bridge Tolls  
In-Reply-To: <002901ccf24b\$597b8d00\$179f480c@KB6NAX>  
References: <002901ccf24b\$597b8d00\$179f480c@KB6NAX>  
Message-ID: <3991E4FF1A0145F4B82B062FC98E1C30@cyrus>

Arden,

Someone has hacked your account to send a message that does not sound like you, and doesn't have your shelter dog sig. Perhaps one of your children?

I mean, if there's no toll then where does the money come from to maintain the bridge? Minneapolis residents know that they do fall down and kill people.

Bill Hawkins

-----Original Message-----

From: Arden Allen

Sent: Thursday, February 23, 2012 10:51 AM

To: Old Tube Radios (new)

Subject: [BoatAnchors] No More Bridge Tolls

Boatanchorites,

I just created a petition: NO MORE BRIDGE TOLLS!, because I care deeply about this very important issue.

I'm trying to collect 1000000 signatures, and I could really use your help.

To read more about what I'm trying to do and to sign my petition, click here:

<http://www.change.org/petitions/no-more-bridge-tolls>

It'll just take a minute!

Once you're done, please ask your friends to sign the petition as well. Grassroots movements succeed because people like you are willing to spread the word!

Arden  
KB6NAX

-----  
BoatAnchors mailing list  
BoatAnchors at theporch.com  
<https://minime.theporch.com/mailman/listinfo/boatanchors>

From gumbear at pacbell.net Fri Feb 24 21:12:16 2012  
From: gumbear at pacbell.net (Arden Allen)  
Date: Fri, 24 Feb 2012 18:12:16 -0800  
Subject: [BoatAnchors] Radio Daze doing glass dials again  
Message-ID: <003801cccf362\$ebbc820\$fa9e480c@KB6NAX>

Busted dial glass?

Here's Radio Daze's announcement. Custom dial making on glass and plastic

also.

<http://hosted.verticalresponse.com/595231/10636c1d33/283402001/81620e06b9/>

Arden Allen  
KB6NAX

Adopt a shelter dog,  
save an innocent life,  
and make a friend forever =:-)

From 1gdm3 at charter.net Sun Feb 26 18:51:07 2012  
From: 1gdm3 at charter.net (GDM)  
Date: Sun, 26 Feb 2012 17:51:07 -0600  
Subject: [BoatAnchors] 110 VAC Regulator Unit  
In-Reply-To: <003801ccf362\$ebbc820\$fa9e480c@KB6NAX>  
References: <003801ccf362\$ebbc820\$fa9e480c@KB6NAX>  
Message-ID: <4F4AC56B.1050002@charter.net>

Greetings: Stumbled across the following at a flea market.

Nippon America ATVR 2000 Automatic Voltage Regulator  
Selectable inputs of 80-140 VAC \_OR\_ 100-240 VAC  
Regulated Outputs: (1) at 110VAC and (1) at 220VAC, each +/- 4%  
Capacity: 1000 watts

Caught my eye immediately as a source of regulated 110VAC to feed my  
multiple boat anchors.  
Here's the questions:

Anyone have any experience with these units?

The seller had three of them and sold them to me for \$5.00 each (NIB).  
He couldn't find anyone who wanted to throttle back 125VAC to 110VAC!

Tested the three units and they seem to work as indicated, however,  
voltage outputs (measured with a Fluke 77) are 106VAC, 108VAC and 109 VAC.

Naturally I had to immediately open the 106VAC unit to see if there was  
some sort of adjustment pot. No such luck. (106VAC IS within 4% spec)

Main components are a large xformer and nine "ice cube" style relays.  
The relays are wired to multiple different taps on the xformer. There  
is also a circuit board. I don't have a schematic so I am guessing that  
the circuit board senses the output voltage and switches the appropriate  
relay(s), and therefor xformer windings, to make the output near 110VAC.

If one were going to parts of the world that have very unstable power, this would be a great unit. One would have close to 110 VAC as the units merrily switched windings in out to keep things near 110VAC.

73 W90AK

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No virus found in this message.

Checked by AVG - [www.avg.com](http://www.avg.com)

Version: 2012.0.1913 / Virus Database: 2114/4833 - Release Date: 02/26/12

From charlesmorris800 at centurytel.net Mon Feb 27 17:14:17 2012

From: charlesmorris800 at centurytel.net (Charles)

Date: Mon, 27 Feb 2012 16:14:17 -0600

Subject: [BoatAnchors] FS: two 3" CRTs

Message-ID: <69C4EDA8-57F5-4398-BDFA-45834BEE17D3@centurytel.net>

I have two 3" CRTs gathering dust I'd like to sell... both work. No burns.

One 3DP1A (radial deflection electrode in the center of the screen).

One 3JP7. There is a light scratch across the very edge of the face.

Can send pics showing trace, a circular display (plugged into my J-scope indicator).

Make me any reasonable offer so I don't have to hassle with that auction place... shipping will be from US zip 65775.

thanks

Charles